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HAZARDOUS WASTE INVENTORY AND DISPOSAL ASSESSMENT FOR THE SPACE SHUTTLE PROJECT

VOLUME I. INVENTORY

FINAL REPORT

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PREFACE

This report was prepared by SCS Consulting Engineers, Inc., Long Beach, California 90807. This Hazardous Waste inventory and Disposal Assessment was initiated by the Air Force to meet the requirements of the Resource Conservation and Recovery act of 1976 as amended in 40 CFR 261 & 264 May 19, 1980, and the California Administrative Code, title 22 Division 4. The report will be used as a reference document to the 1978 Space Shuttle Supplement 1. It will also be used for hazardous waste reporting to EPA/California, for hazardous waste management planning, and for engineering design concepts for the STS.

The report is in three volumes. Volume I is an inventory of hazardous wastes likely to be generated by the West Coast STS project. Volume II is an analysis of recycle, treatment, and disposal options for managing the projected STS Wastes. Volume III is an appendix with reference material for Volume II.

This work was accomplished between September 1980 and June 1981. Mr. John R. Edwards, Headquarters Space Division was the Project Officer.

This report has been reviewed by the office of Public Affairs (PA) and is releasable to the National Technical Information Service (NTIS). At the NTIS it will be available to the general public, including foreign nations.

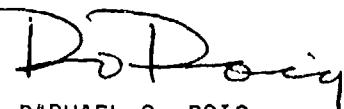
This report has been reviewed and is approved for publication.



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20. ABSTRACT (Cont'd. on reverse side if necessary and identify by block number) The Space Shuttle Program (STS) at Vandenberg Air Force Base is expected to generate a variety of hazardous wastes during its years of operation, from 1985 through 1999. The purpose of this study was to compile a projected inventory of the types and quantities of hazardous waste likely to be generated by shuttle-related ground operations. This inventory will be used to assess waste management options, to complete EPA hazardous waste forms, and for preparing the supplement to the Environmental Impact Statement.			

20. (continued)

The inventory lists waste types; chemical constituents; baseline and contingency mass and volume per launch, for each year of the project, and per month for each year; EPA and California hazardous waste numbers and hazardous properties; and California compatibility class.

Total baseline waste generation for the STS project is anticipated to be 130 million kg. The greatest quantities of wastes are expected to be generated by Station Sets V23 and V32 (72 million kg and 54 million kg, respectively). Estimated total project waste generated under contingency conditions is 1.4 million kg. The only station sets identified as potential generators of contingency wastes are V19, V21, and V23. Station Set V23 is expected to generate approximately 84 percent by weight of all contingency wastes.

99.6 percent by weight of all hazardous waste will be in liquid form, principally originating from flame bucket quenching (55.9 percent) and SRB washing and rinsing (41.9 percent). The remaining 0.4 percent by weight of all hazardous waste is expected to be in solid state. Most solid waste will be generated by Station Sets V31 and V32.

Further breakdown of wastes into hazardous and acutely hazardous categories reveals that only 1.8 percent by weight of total hazardous waste is expected to exhibit acutely hazardous properties. Primary generators of acutely hazardous waste will be Station Sets V19, V23, V21, and V17.

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SECTION 1

EXECUTIVE SUMMARY

1. INTRODUCTION

The space shuttle program at Vandenberg Air Force Base is expected to generate a variety of hazardous wastes during its years of operation, from 1985 to 1994. The purpose of this report is to present an inventory of the expected types and quantities of waste to be generated by shuttle-related ground operations. The inventory provides estimates for:

- Types of wastes generated.
- Chemical constituents in each waste stream.
- Mass and/or volume of waste generated during scheduled ground operations (per launch cycle, per month per year, and project total).
- Mass and/or volume of waste generated under contingency conditions (per contingency event, per year, and project total).
- EPA and California hazardous waste numbers for each waste.
- EPA and California hazardous properties for each waste.
- California compatibility class for each waste.

The inventory will be used to assess waste management options (Volume II of this report), to complete EPA hazardous waste forms, and for preparing the supplement to the Environmental Impact Statement required for the Space Transportation System (STS) project.

2. HAZARDOUS WASTE REGULATIONS FOR GENERATORS

The U.S. Environmental Protection Agency (EPA) has developed a nationwide program to regulate hazardous wastes from generation to final disposal, through directives in the Resource Conservation and Recovery Act (RCRA) of 1976 (PL94-580). Under RCRA rules, Vandenberg Air Force Base (VAFB) is considered a generator of hazardous waste, and depending on its final waste management

plan, may also be considered as a storage, treatment, and/or disposal facility.

Regulations for generation of hazardous wastes are discussed in Volume I of this report. The primary responsibilities of the generator include:

- Identifying all hazardous wastes generated by the base and its tenants.
- Notifying EPA of hazardous activities within 90 days from the time that waste-generating activities commence.
- Obtaining an EPA generator's identification number.
- Preparing a hazardous waste manifest (in California, the California Hazardous Waste Manifest must be used).
- Properly containerizing and labeling waste and placarding transport vehicles.
- Reporting to California Department of Health Services:
 - Monthly (copies of manifests from the previous month)
 - Annually (submittal of completed EPA Annual Report Forms 8700-13 and 8700-13a).

Other requirements for generators include obtaining special permits for each shipment of extremely or acutely hazardous waste; and obtaining a permit if waste is to be stored by the generator for more than 60 days.

It is anticipated that by April 1981, California will receive interim authorization to administer its own hazardous waste program. At that time, the generator will be subject to all rules under California Administrative Code, Title 22. Until California receives final authorization, the generator must also comply with federal regulations authorized under RCRA.

3. SOURCES OF WASTE

A summary of the hazardous wastes generated over the duration of the STS project at VAFB is given in Tables 1, 2, and 3, monthly, yearly, and total project quantities, respectively, are reported for normal operations and contingency conditions.

TABLE 1. SUMMARY OF BASELINE MONTHLY HAZARDOUS WASTE GENERATION, 1985 - 1994

Monthly for 1985		Monthly for 1986		Monthly for 1987		Monthly for 1988-1994	
Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
346,656.8	764,251.5	519,985.3	1,146,377.5	866,642.5	1,910,629.8	1,299,963.8	2,865,944.5

TABLE 2. SUMMARY OF BASELINE YEARLY HAZARDOUS WASTE GENERATION, 1985-1994

1985		1986		1987		Yearly for 1988-1994		Project Total	
Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
4,159,882.0	9,171,018.0	6,239,824.0	13,756,530.0	10,395,710.0	22,927,556.0	15,599,566.0	34,391,336.0	129,996,350.0	286,594,408.0

TABLE 3. SUMMARY OF CONTINGENCY HAZARDOUS WASTE GENERATION, 1985-1994

1985		1986		1987		Yearly for 1988-1994		Project Total	
Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
121,367.7	267,571.5	124,633.5	274,771.5	131,165.2	289,171.5	139,329.8	307,171.5	1,352,475.0	2,981,715.0

As shown in Table 2, total baseline waste generation for the STS project is anticipated to be 130 million kg (287 million lbs). Annual waste generation is estimated to range from 4.2 million kg/yr (9.2 million lbs/yr) for 1985, to 15.6 million kg/yr (34.5 million lbs/yr) for each of the years 1988 through 1994. This increase reflects changes in the number of launches per year from 4 to 15. Baseline waste generation for each year of the project is graphically represented in Figure 1.

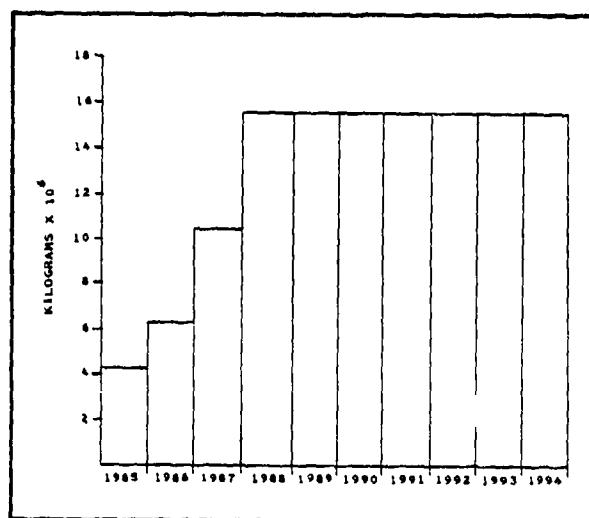


Figure 1. Baseline quantities of hazardous waste generated by STS ground operations at VAFB (reported for each year for the period 1985 through 1994).

The greatest quantities of wastes are expected to be generated by V23 (72 million kg; 160 million lbs for total project), followed by Station Set V32 (54 million kg; 120 million lbs for total project). This accounts for 97.5 percent by weight of all baseline hazardous waste generation. The combined waste generated by all other Station Sets is projected to be 2.5 orders of magnitude less by weight than waste generation at V23 and V32.

Expressed as percentages by weight (Figure 2), Station Set V23 is projected to generate 55.7 percent of the total under normal operating conditions; V32 approximately 41.8 percent; and V19 and V31, less than 1 percent each. The balance of these wastes (i.e., 0.9 percent) will be generated mainly by Station Sets V17 and V21.

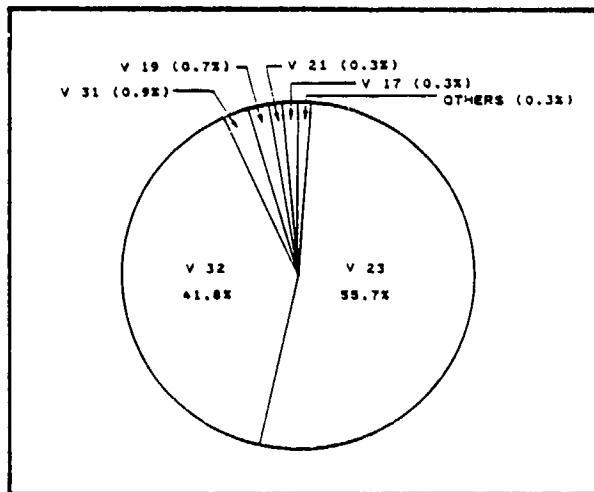


Figure 2. Baseline quantities of hazardous waste generated by STS ground operations at VAFB (reported by station set).

According to Table 3, estimated total project waste generated under contingency conditions is 1.4 million kg (3.0 million lbs). The only station sets identified to date as potential generators of contingency wastes are V19, V21, and V23 (Figure 3). Station set V23 will produce approximately 84 percent by weight of all contingency waste.

Investigations into the physical state of the hazardous wastes generated during normal operations indicate that the majority of wastes are in a liquid state (Figure 4a). Major sources of liquid hazardous wastes, as shown in Figure 4c, are expected to be produced during normal ground operations at Station Sets V23 (55.9 percent) and V32 (41.9 percent). Other station sets each produce less than 1 percent of total liquid wastes. In summary, 99.6 percent by weight (1.0 million kg; 2.3 million lbs) of all the hazardous wastes will be in a liquid form (Figure 4a). This translates to 92.7 percent on a volumetric basis.

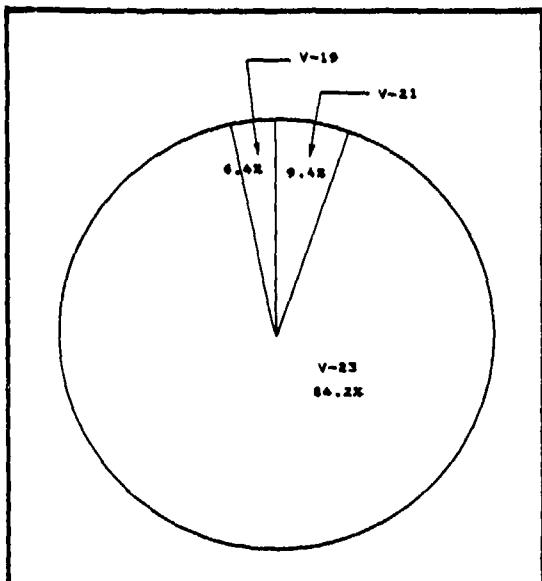


Figure 3. Contingency waste generated by STS ground operations at VAFB (Station Sets V19, V21 and V23).

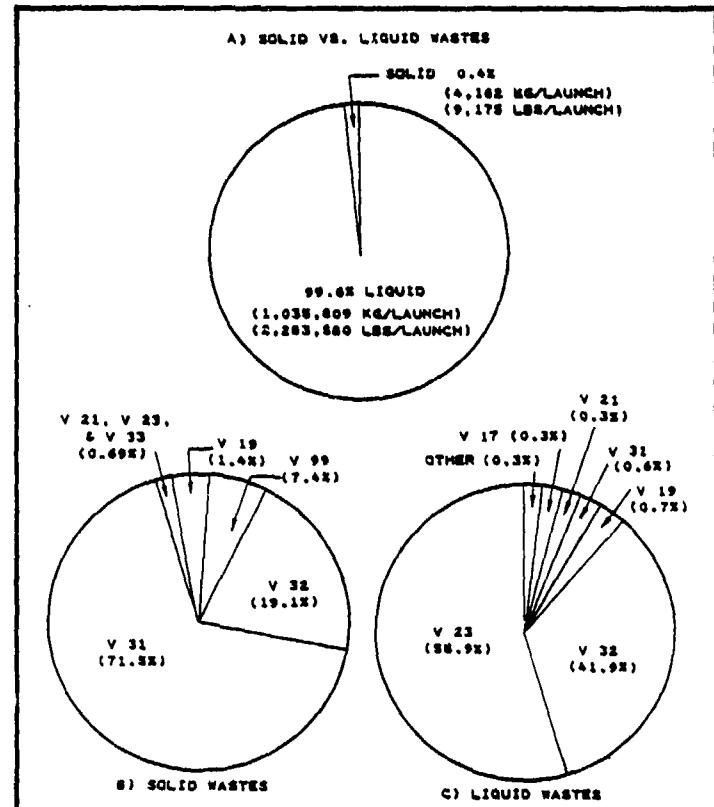


Figure 4. Physical state of hazardous waste generated by STS ground operations at VAFB under baseline conditions (reported by station set).

Only 0.4 percent by weight (7.3 percent by volume) of all hazardous wastes are expected to be in a solid state (Figure 4a). Most solid waste will be produced by Station Set V31 (71.5 percent) and Station Set V32 (19.1 percent) as shown in Figure 4b. Solid waste generation by all other station sets is less than 10 percent of total solids.

4. MAJOR TYPES OF WASTES GENERATED

Waste categories generated in the largest quantities are expected to be:

- Quench water (QW).
- SRB wash water (SB).
- Insulation wastewater (or "suprawater") (IW).
- SRB initial rinse (SI).
- Contaminated seawater (CS).
- Nonaqueous solvent wastes (SO).
- EEW&S wastewater (EW).
- Fuel spill cleanup wastes (FS).
- Hydrazine scrubber effluent (HS).

These wastes are estimated to constitute 99.4 percent by weight of total waste generation (129 million kg; 284 million lbs). The QW is projected to be the most predominant waste type,

followed by SB and IW wastes. As shown in Figure 5a, these three waste types constitute 54.6, 20.4, and 17.8 percent by weight, respectively, of the total quantity of wastes generated by the major waste categories. Other major waste categories produce 7.2 percent of the total waste. The remaining 0.6 percent of waste is associated with the following minor categories (Figure 5b):

- Adhesive wastes (AW).
- Batteries (BA).
- Contaminated air filters (CA).
- Catalytic bed wash water (CB).
- Containers (CN).
- Contaminated rags (CR).
- Hydraulic fluids (HF).
- Hydrazine (HY).
- Insulation wastes, solid (IN).
- Monomethyl hydrazine (MH).
- Ammonia or ammonia wastewater (NH).
- Nitrogen tetroxide (NO).
- Oxidizer spill cleanup (OS).
- Paint wastes (PA).
- Paint wastewaters (PW).
- Solvent reducer wastes (SR).
- Solvent wastewaters (SW).
- Worn-out parts (WP).

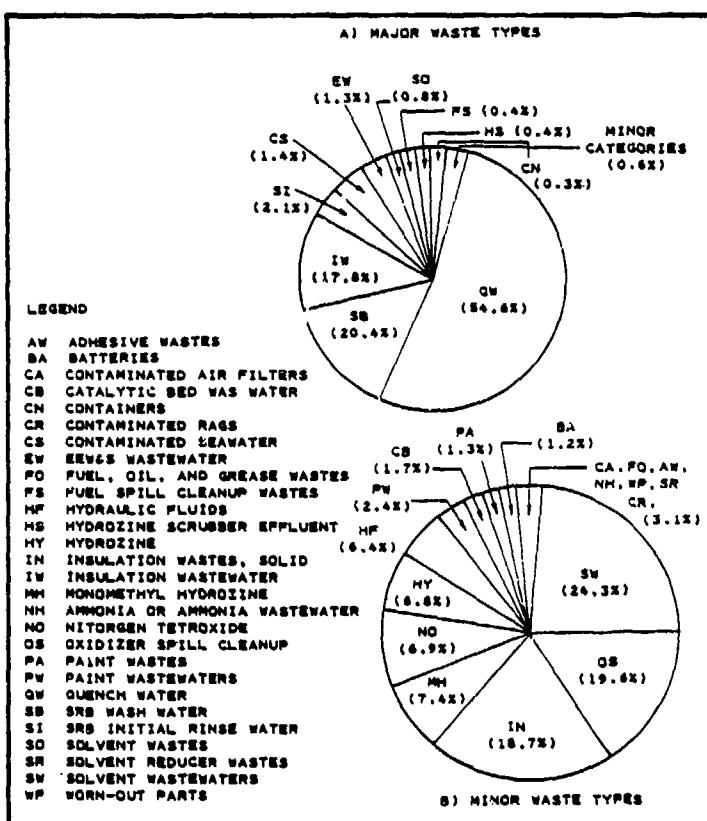


Figure 5. Hazardous waste generated under baseline conditions, by waste type.

The first three minor categories are expected to jointly contribute over 60 percent by weight to the 0.6 percent of minor wastes.

5. HAZARDOUS AND ACUTELY HAZARDOUS WASTES

Further breakdown of wastes into hazardous and acutely hazardous categories reveals that only 1.8 percent by weight of total hazardous wastes are expected to exhibit acutely hazardous properties (Figure 6a). Primary generators of acutely hazardous waste will be Station Sets V19 (37.0 percent), V23 (25.8 percent), V21 (18.2 percent), and V17 (14.9 percent) (Figure 6b). The remaining 4.1 percent is expected to be generated by Station Sets V31 and V32 (3.3 and 0.8 percent, respectively) (Figure 15b). As shown in Figure 7, most of the hazardous wastes generated by Station Sets V17, V19 and V21 are expected to exhibit acutely hazardous properties.

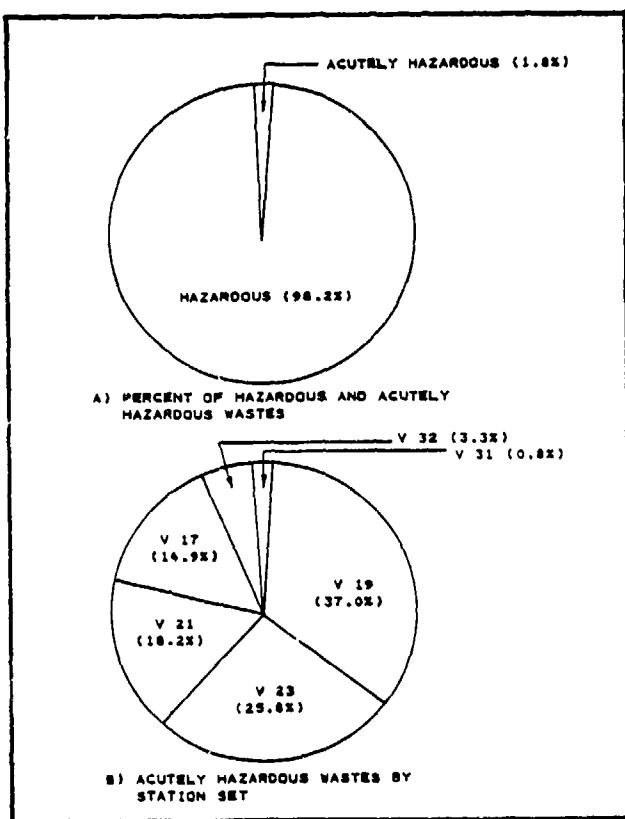


Figure 6. Hazardous and acutely hazardous waste generation under baseline conditions.

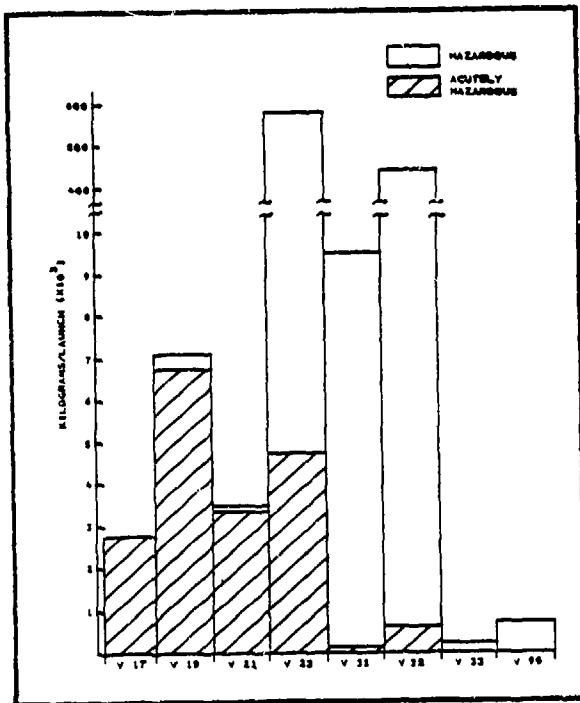


Figure 7. Comparison of hazardous and acutely hazardous waste generation under baseline conditions (reported by station set on a per launch basis).

Generation rates for hazardous and acutely hazardous wastes are provided in Tables 4 and 5. Total projected baseline quantities of hazardous and acutely hazardous waste per launch are 1.0 million kg (2.2 million lb) and 0.02 million kg (0.04 million lb), respectively (Table 4). Consequently, the projected cumulative generation of these wastes for the period 1985 through 1994 is expected to be 128 million kg (282 million lb) and 2.3 million kg (5.1 million lb), respectively (Table 5).

TABLE 4. SUMMARY OF HAZARDOUS AND ACUTELY HAZARDOUS WASTE GENERATION PER MONTH, 1985-1994

	Per Launch		1985 Monthly		1986 Monthly		1987 Monthly		1988-1994 Monthly	
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
Acutely Hazardous Wastes	18,333.3	40,418.3	6,111.1	13,472.8	9,166.7	20,209.2	15,277.8	33,681.9	22,916.7	50,522.9
Hazardous Wastes	1,021,637.3	2,252,336.7	340,545.7	750,778.7	510,818.6	1,126,168.3	851,365.7	1,876,947.9	1,277,047.1	2,815,421.6
TOTAL	1,039,970.6	2,292,755.0	346,656.8	764,251.5	519,985.3	1,146,377.5	866,642.5	1,910,629.8	1,299,963.8	2,865,944.5

TABLE 5. SUMMARY OF HAZARDOUS AND ACUTELY HAZARDOUS WASTE GENERATION PER YEAR, 1985-1994

	1985		1986		1987		1988-1994 (per year)		Total for Project	
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
Acutely Hazardous Wastes	73,333.4	161,673.2	110,000.0	242,509.8	183,333.4	404,183.0	275,000.1	606,274.5	2,291,667.1	5,052,287.5
Hazardous Wastes	4,086,548.6	9,009,314.8	6,129,824.0	13,514,020.2	10,216,376.6	22,523,373.0	15,324,566.9	33,705,092.5	127,704,636.9	281,542,017.5
TOTAL	4,159,882.0	9,171,018.0	6,239,824.0	13,756,530.0	10,399,710.0	22,927,556.0	15,599,566.0	34,391,366.0	129,996,304.0	286,594,304.0

SECTION 2

FEDERAL AND STATE REGULATIONS FOR HAZARDOUS WASTE GENERATORS

The U.S. Environmental Protection Agency (EPA) has developed a nationwide program to regulate hazardous wastes from generation to final disposal, through directives in the Resource Conservation and Recovery Act (RCRA) of 1976 (PL94-580). These regulations are not industry-specific; all industries, including Department of Defense (DOD) facilities, which generate, store, transport, treat, or dispose of hazardous wastes, are affected by RCRA and must comply with the same set of rules. Vandenberg Air Force Base (VAFB) is considered a generator of hazardous waste, and, depending on its final waste management plan, may also be considered as a storage, treatment, and/or disposal facility.

This section provides a comparison between federal (RCRA) and California (Title 22) hazardous waste regulations. Responsibilities of the hazardous waste generator are also discussed, and include RCRA requirements as well as additional requirements imposed by Title 22. Requirements for transporters and for owners and operators of storage, treatment, and disposal facilities are presented in Volume II. It is important to note that the requirements discussed in this report reflect regulations on the record as of December 1980. Many changes in both state and federal hazardous waste regulations are anticipated for 1981.

The major provisions under RCRA for controlling hazardous wastes are:

- 40 CFR Part 260: Definitions used in other parts corresponding to Sections 3001 through 3004 RCRA rules, and general provisions applicable to these parts (FR date 5/19/80, Part II).
- 40 CFR Part 261: Section 3001: Identification and listing of hazardous waste (FR date 5/19/80, Part III).
- 40 CFR Part 262: Section 3002: Standards applicable to generators of hazardous waste, including manifest system, recordkeeping, and reporting (FR date 5/19/80, Part V).
- 40 CFR Part 263: Section 3003: Standards applicable to transporters of hazardous waste, including manifest system, recordkeeping, and reporting (FR date 5/19/80, Part VI).

- 40 CFR Part 264: Section 3004: Standards applicable to owners and operators of hazardous waste treatment, storage, and disposal facilities, including manifest system, recordkeeping, and reporting (FR date 5/19/80, Part VII).
- 40 CFR Part 265: Section 3004: Interim status standards applicable to owners and operators of hazardous waste treatment, storage, and disposal facilities (FR date 5/19/80, Part VII).
- 40 CFR Parts 122 and 124: Section 3005: Permits for treatment, storage, and disposal of hazardous waste (FR date 5/19/80, Part X).
- 40 CFR Part 123: Section 3006: Guidelines for authorized state hazardous waste programs (FR date 5/19/80, Part X).
- Section 3010: Preliminary notification of hazardous waste activity (FR date 2/26/80).

Section 3006 of RCRA provides for individual states to operate their own hazardous waste programs (HWP) in lieu of the federal program. Title 40 CFR, Part 123, establishes minimum requirements which state HWP's must meet in order to receive EPA approval. The State of California Department of Health Services (CDHS) and the State Water Resources Control Board have applied for interim authorization (Phase I) to administer a state HWP. It is anticipated that interim authorization will be granted by April 1981. With interim authorization, California can operate its own HWP for 2 years after the effective date of the federal regulations. Final or full authorization will be granted if California's HWP is determined by EPA to be equivalent to and consistent with the federal program. The California HWP could be fully authorized by the November 1983 deadline, 2 years prior to the first space shuttle launch at VAFB. For the present, California waste generators must meet both current California Title 22 and RCRA standards (by the time California is granted full authorization, all applicable RCRA regulations will have been incorporated into Title 22). DOD facilities operating in California must, by executive order, comply with all California laws. Milestone events for implementing the California HWP are as follows (5):

1981	Program interim authorization will be received; electronic data processing system will be operational; statewide surveys of hazardous waste production will be completed.
1981	Hazardous waste recycling clearinghouse will match waste producers with potential markets for wastes; technical information center will provide rapid response to emergencies, and provide information

about waste characteristics, treatment, methods, etc.

1982 Full staff will be "on board," and the state HWP plan will be completed.

1983 All qualified hazardous waste facilities will be under permit.

Although federal requirements will not preempt California law, they will impose a second layer of control on California generators and handlers of hazardous waste who must comply with the most restrictive standard, whether federal or state. For example, states may not preempt federal regulations by imposing any requirement that might interfere with the free movement of hazardous wastes across state boundaries to treatment, storage, or disposal facilities holding an RCRA permit. An outline comparing the fundamental differences between EPA and CDHS regulations for generators of hazardous wastes is presented in Table 6.

Responsibilities of Generators

In order to comply with both EPA and California regulations, a California generator will have the following duties and obligations:

Identifying Hazardous Wastes--It must first be determined if a waste meets the hazardous waste criteria as defined in the RCRA (40 CFR 261) and/or the California Administrative Code (CAC), Title 22. Any solid waste (see glossary definition of a solid waste) is considered hazardous if it is flammable, corrosive, toxic, reactive, irritating, a strong sensitizer, or exhibits EP toxicity. The definitions of these hazardous characteristics are found in 40 CFR 261, Subpart C, and in CAC Title 22. A detailed explanation of these characteristics is found in Appendices B and C. Federal regulations also identify specific wastes considered to be acutely hazardous (40 CFR 261, Subpart D). Similar, but not identical, to the EPA listing are the extremely hazardous wastes identified in CAC Title 22. Eventually, the California rules will include all of EPA's listed wastes, and perhaps additional wastes which the state considers hazardous. For the present, all wastes listed by EPA and the State of California must be manifested. However, EPA annual reports require only EPA-listed wastes.

If a waste is unlisted, a generator may choose to test the suspected waste to determine whether or not it is hazardous, or may declare the waste to be hazardous without testing, based on a knowledge of its hazardous properties (45 FR 262.11). Test protocols are published in Test Methods for Evaluating Solid Waste, USEPA Office of Water and Waste Management, SW-846, 1980.

Small-Quantity Generator Exceptions--Under the EPA regulations, small waste generators (i.e., <1,000 kg/mo hazardous

TABLE 6. COMPARISON OF FEDERAL AND CALIFORNIA REGULATIONS FOR GENERATORS OF HAZARDOUS WASTES SHIPPING TO AN OFF-SITE TREATMENT, STORAGE, OR DISPOSAL FACILITY (41)

Federal	State
Determine if waste is hazardous as defined in 40 CFR, Part 261.	Determine if waste is hazardous as defined in Cal. Ad., Title 22, Div. 4.
Obtain EPA Identification Number (ID#).	--
Obtain EPA Facility Permit if waste has accumulated on generators property for more than 90 days.	Obtain Facilities Permit from CDHS if waste has been stored on property for more than 60 days.
Use proper containers and label properly.	Same
Prepare EPA-specified transport manifest (California Liquid Waste Haulers Manifest permissible for use during interim period).	Must use California Liquid Waste Haulers Manifest (EPA data will be included in future); manifest will eventually be consistent with EPA requirements.
Ship hazardous waste only by a transporter with an EPA identification number.	Ship hazardous waste <u>only</u> with a transporter permitted by CDHS.
Make sure that waste arrives at designated facility.	Same
Submit annual summary of waste disposal activities (Annual Report) and file 45-day Exception Reports for missing manifests to EPA Regional Administrator.	Send copies of all Hazardous Waste Manifests to CDHS every 30 days. Must also report to EPA Region IX annually and make 45-day Exception Reports for missing manifests.
Must keep manifests, annual reports, exception reports, and test results for a period of 3 years.	Reports on hazardous waste activities must be kept for a period of not less than 1 year.

waste; <1 kg/mo acutely hazardous waste) are exempt from record-keeping/manifest requirements (45 FR 261.5). California regulations are more stringent, allowing no exemptions. Even if the generator would qualify as a small generator under RCRA, no exemption would be allowed under California law. California does provide a variance for small quantities or low concentrations. Exact quantities and concentrations are not specified, but the general description states insignificance as a potential hazard to human health, domestic livestock, or wildlife. EPA plans to amend the small generator exceptions over the next 2 to 5 years, possibly reducing the present limit for hazardous wastes from 1,000 to 100 kg/mo. The limit for acutely hazardous waste is not expected to change.

Notification of Hazardous Activities--Within 90 days from the time that operations at the space shuttle facility commence, and before any waste can be transported, the generator will be required to notify the EPA Region IX Administrator and apply for an EPA identification number (45 FR, Part 262.12; 45 FR, Page 12746). If the generator also plans to own/operate facilities for treatment, storage, or disposal of hazardous waste, it may file a single form to cover all activities that occur on the base. There are stiff penalties for failing to notify EPA, including suspension of all operations.

Transportation of Hazardous Wastes--The generator has two options available if hazardous waste is to be transported off site. They may contract with a state-licensed commercial hauler, or transport waste themselves, in which case they must obtain an EPA Transporter's Identification Number (45 FR 263.11) and a California Registered Hazardous Waste Hauler's Permit (CAC Title 22). In addition, they must comply with all applicable EPA (40 CFR 263.11 and 263.31) and Department of Transportation (Hazardous Materials Transportation Act, 49 CFR Parts 171 through 179) regulations. A generator must insure that the hazardous waste is properly containerized and labeled, and that trucks are placarded in accordance with EPA (40 CFR Part 262.30) and DOT (49 CFR Parts 171 through 179) regulations controlling the transportation of hazardous materials.

Hazardous Waste Manifest--Before shipping any hazardous wastes, a generator must prepare the California Hazardous Waste Manifest. Figure 8 presents the new California Hazardous Waste Manifest, which has been developed to insure that California hazardous waste generators, transporters, and facility operators will be in conformance with both the requirements of the new federal hazardous waste regulations adopted pursuant to RCRA, and the requirements of state law. The new manifest will replace the current California Liquid Waste Hauler Record or hazardous waste manifest.

As has been the practice in the past, transporters are expected to print their own manifests. Each manifest will have a unique serial number, as described in Item 1 of "Instructions for

CALIFORNIA HAZARDOUS WASTE MANIFEST
 STATE DEPARTMENT OF HEALTH SERVICES
 HAZARDOUS MATERIALS MANAGEMENT SECTION
 144 P STREET, SACRAMENTO, CA 95814

PRESS HARD

GENERATOR (GENERATOR MUST COMPLETE)

(1) NAME _____
 EPA NO. _____
 ADDRESS _____
 CITY STATE ZIP CODE _____
 PHONE NO. _____
 ORDERER PLACED BY _____
 CARRIER NO. _____

(2) DESIGNATED TSD FACILITY
 AUTHORIZED TO OPERATE UNDER AN APPROVED STATE OR FEDERAL PROGRAM

NAME _____
 EPA NO. _____
 ADDRESS _____
 CITY STATE ZIP CODE _____
 PHONE NO. _____

(3) ALTERNATE TSD FACILITY

NAME _____
 EPA NO. _____
 ADDRESS _____
 CITY STATE ZIP CODE _____
 PHONE NO. _____

(4) U.S. DOT PROPER SHIPPING NAME
 WASTE
 WASTE

U.S. DOT HAZARD CLASS	UN NO	REG. NO.	UNITS	CONTAINERS NUMBER	UNITS
				DRUMS	<input type="checkbox"/>
				BAGS	<input type="checkbox"/>
				CARTONS	<input type="checkbox"/>
				OTHER	<input type="checkbox"/>
				DRUMS	<input type="checkbox"/>
				BAGS	<input type="checkbox"/>
				CARTONS	<input type="checkbox"/>
				OTHER	<input type="checkbox"/>

(5) WASTE CATEGORY
 CONC. RANGE
 UPPER LOWER UNITS

A			E	
B			F	
C			G	
D				

(6) NONHAZARDOUS MATERIAL
 UNITS

(7) WASTE PROPERTIES
 TOXIC FLAMMABLE CORROSIVE IRITANT REACTIVE
 PHYSICAL STATE SOLID LIQUID SLUDGE GEL
 SPECIAL HANDLING INSTRUCTIONS GLOVES OTHER SEMI-SOLID CAMPIONIC AND AGGRESSIVE
 RESPIRATOR OTHER

(8) GENERATOR CERTIFICATION: THIS IS TO CERTIFY THAT THE ABOVE NAME OF MATERIALS ARE PROPERLY CLASSIFIED, PACKAGED, MARKED & LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION AND THE EPA.

(9) IN THE EVENT OF A SPILL CONTACT THE NATIONAL RESPONSE CENTER U.S. COAST GUARD 1-800-424-8802.

TRANSPORTER (TRANSPORTER MUST COMPLETE)

(10) NAME _____
 EPA NO. _____
 ADDRESS _____
 CITY STATE ZIP CODE _____
 PHONE NO. _____

(11) JOB NO. _____
 UNIT NO. _____

(12) PICK UP DATE _____ AM PM
 TIME _____

(13) SIGNATURE OF AUTHORIZED AGENT & TITLE _____
 DATE ACCEPTED _____

(14) HANDLING OR DISPOSAL METHOD
 SURFACE IMPOUNDMENT LANDFILL
 INJECTION WELL LAND TREATMENT
 TREATMENT SPECIFIC
 RECOVERY OR REUSE
 STORAGE/TRANSFER

(15) IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY
 NAME _____
 EPA NO. _____
 ADDRESS _____

(16) SIGNATURE OF AUTHORIZED AGENT & TITLE _____
 DATE ACCEPTED _____

Figure 8. California hazardous waste manifest form.

"Completing Manifest" (see Figure 9). The instructions will be printed on the backs of each manifest and manifest copy. These instructions specify the requirements for using the manifest, for transferring waste, and for distributing manifest copies.

The new federal regulations, which became effective on November 19, 1980, require that certain information which was not previously required by California law now be provided on all hazardous waste manifests. That information includes the following:

- EPA I.D. number of the generator, transporter, and TSD (treatment, storage, and disposal) facilities.
- Hazardous materials descriptions as required by the U.S. Department of Transportation in 49 CFR.
- The name, address, and EPA I.D. of the TSD facility designated by the generator to receive the waste, and, if desired, an alternate facility.
- A generator's certification with the statement exactly as shown on the enclosed manifest.

The current Liquid Waste Hauler Record cannot be used after December 31, 1980. On January 1, 1981, the new manifest will be the only acceptable shipping document to accompany hazardous waste shipments in California. Questions regarding the new manifest or its use should be directed to one of the following Hazardous Materials Management Section offices:

Sacramento

Hazardous Materials Management Section
714 "P" Street
Sacramento, California 95814
(916) 322-2337

Berkeley

Hazardous Materials Management Section
2151 Berkeley Way, Room 140
Berkeley, California 94704
(415) 540-2043

Los Angeles

Hazardous Materials Management Section
107 S. Broadway, Room 7012
Los Angeles, California 90012
(213) 620-2380

After completing the manifest and transferring the waste to the transporter, a designated person representing the generator signs the certification on the original manifest and all copies

FEDERAL REGISTER / Vol. 45, No. 98 / Monday, May 19, 1980 / Rules and Regulations		EPA-4220-PE Form Approved Under E.O. 12812	
<p align="center">SEPA</p> <p align="center">GENERATION ANNUAL REPORT</p> <p align="center">SECTION 1. INFORMATION CONCERNING THE FACILITY</p> <p align="center">1. FACILITY NAME (cont'd.)</p> <p align="center">2. FACILITY STATE (cont'd.)</p> <p align="center">3. FACILITY ADDRESS (cont'd.)</p> <p align="center">4. GENERATION OF WASTE</p> <p align="center">5. SOURCE OF ENERGY</p> <p align="center">6. SOURCE OF FUEL</p> <p align="center">7. SOURCE OF WATER</p> <p align="center">8. SOURCE OF AIR</p> <p align="center">9. SOURCE OF SOIL</p> <p align="center">10. SOURCE OF LANDFILL</p> <p align="center">11. SOURCE OF SOLVENTS</p> <p align="center">12. SOURCE OF REFRIGERANT</p> <p align="center">13. SOURCE OF COOLANT</p> <p align="center">14. SOURCE OF OIL</p> <p align="center">15. SOURCE OF GAS</p> <p align="center">16. SOURCE OF LIQUID</p> <p align="center">17. SOURCE OF SOLVENTS</p> <p align="center">18. SOURCE OF REFRIGERANT</p> <p align="center">19. 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Figure 9. EPA forms 8700-13 and 8700-13a.

(one for each person handling the waste). The transporter then signs and dates the manifest and returns one copy to the generator, who retains it until a copy is received from the designated permitted facility following delivery of the waste. A generator is required to initiate a trace if it does not receive a copy of the manifest from the disposal facility within 35 days after the waste has been shipped. All contacts made while tracing a delinquent manifest should be well documented. If the manifest has not been received within 45 days after shipment, the generator must report the incident to CDHS at (916) 322-2337. Supporting documentation may be required.

Reporting Requirements for Generators--The generator will be required to send copies of all manifests from the previous month to California Department of Health Services, Hazardous Materials Management Branch, 744 P Street, Sacramento, California 95814. In addition, federal regulations require an annual report from generators who ship hazardous waste off site (45 FR 262, Subpart D). The Annual Report is made on EPA Forms 8700-13 and 8700-13a (Figure 9), and sent to CDHS in Sacramento. (If, however, a generator decides to treat, store, or dispose of wastes on base, it must submit an Annual Report covering those wastes in accordance with the provisions of 40 CFR Parts 264, 265, and 266, and with 40 CFR Part 122. In addition to following requirements, generators must comply with reporting requirements for TSD facilities, and should make provisions to hold all records, manifests, and reports for 3 years.

Manifest requirements are somewhat different for rail shipment or bulk shipment of hazardous wastes by water. The generator should consult the regulations if such means are used to transport wastes to permitted handling facilities (45 FR 263, Subpart B).

Disposal of Extremely Hazardous Waste by Generators--Some of the wastes generated by the STS (e.g., monomethyl hydrazine) are defined as extremely hazardous (CAC Sections 66064 and 66680 to 66685). No extremely hazardous waste shall be handled or disposed of in California without an Extremely Hazardous Waste Disposal Permit issued by the state. The generator must apply for this permit at least 15 days prior to the intended date of disposal. It can be expected that TSD facilities will require generators to make arrangements prior to shipment of these special wastes to their sites. Unexpected shipments will be returned at the generator's expense.

Storage Treatment and Disposal of Hazardous Wastes by Generators--If a generator stores hazardous wastes on site for more than 60 days (the 90-day limit set by EPA is preempted by California law), or treats or disposes of hazardous wastes on site, they must apply for and receive a Hazardous Waste Facility Permit, and comply with all applicable regulations (45 FR 264, Subpart A).

An inventory of projected hazardous waste to be generated by the STS is presented in Section 3 of this report. Included with the inventory are many of the items required for the EPA Annual Report, such as hazardous waste identification numbers and waste characteristics. The following section describes the methodology and assumptions used in developing the inventory.

SECTION 3

METHODOLOGY AND ASSUMPTIONS

As of the date of the compilation of this inventory, there have been no space shuttle launches or landings, either at VAFB or KSC. Consequently, operational data regarding waste generation are not yet available. Waste types and quantities must be estimated based on design specifications and projections of materials used. In many cases, these estimates can be related to similar operations, such as aircraft maintenance and conventional rocket launches.

In compiling this inventory, SCS made as much use as possible of existing documentation relating to the proposed space shuttle operation at VAFB. This documentation is listed in the bibliography. In general, the most relevant documents were those concerned with occupational safety and air emissions, since both of these address chemical types and quantities. However, because their inherent purpose differs appreciably from the compilation of a hazardous waste inventory, many and often sizeable data gaps exist.

An attempt was made to bridge these gaps and to complete the data base through direct contact with contractors and Air Force personnel involved in the design of the space shuttle, and related ground operations, facilities, and procedures. Ultimately, a number of questions remain regarding quantities of waste generated and waste forms. Consequently, a number of assumptions and simplifications were necessary to make this inventory as complete as possible. These assumptions and simplifications are detailed below. There are still several areas of uncertainty, however, and in the inventory which follows, a number of wastes are listed without quantity data. This means that a potential hazardous waste was identified, but insufficient information was available at the time of this inventory to produce a reasonable estimate of quantities per launch cycle.

In addition, there were other potentially hazardous wastes identified which are not included in the inventory, i.e., orbiter self-destruct ordnance (SDO) and potential pollution control wastes. It has been established that SDO waste will be generated whenever the orbiter and SRB are deactivated. This waste is hazardous (reactive) under EPA regulatory definitions. However, there are existing military ordnance handling and disposal practices which may be applicable to the shuttle program, and there is an existing ordnance disposal facility at Pt. Mugu. Pollution

control wastes, other than those identified in the baseline inventory, would have to be considered contingency wastes. In particular, SCS believes it likely that some or all of the solvent vapor emissions projected to be vented may come under new regulatory restraints before or during the course of the shuttle program. If this does in fact occur, additional solvent and air pollution control wastes will be generated. The Air Force is aware of this potential. Detailed information on these and other toxic and hazardous STS-related air emissions is available in the Air Force air emissions inventory (23).

VAFB station sets group the various Shuttle Transport System ground operations processing activities into geographic and functional categories. A geographic station set is a site-specific accumulation of equipment, facilities, hardware, and related resources that constitutes a definitive phase of the ground operations. A functional station set is an aggregate of equipment and services, not limited to or readily identified by location, that provides or supports specific functions of system operations.

The inventory prepared for this draft report includes projections of hazardous wastes for eight geographical station sets (i.e., V18, V19, V21, V23, V31, V32, and V33). The potential for hazardous waste generation at Station Sets V27, V28, V30, V81, V84, V86, and V88 cannot be verified at this time. It is considered that these station sets either (1) generate no hazardous waste under baseline conditions, or (2) generate small quantities of hazardous waste which cannot be quantified based on available information.

Assumptions and simplifications were needed to both identify and quantify some of the hazardous waste streams. There are several general types of assumptions and simplifications that have affected the inventory compilation throughout. These are listed below.

- Except where specified in existing STS/VAFB documents, it is assumed that there will be no reclamation or reuse of excess or waste products. This includes excess paint mixtures, used rags, protective clothing (except SCAPE suits), excess hypergols or hypergols removed from the orbiter after an abort or acquisition screen test, and process waters.
- STS data on procedures, materials, and quantities were used wherever they existed. If no STS data were available, an attempt was made to identify relevant KSC data.
- It is assumed that all materials which are not hazardous in and of themselves, but which come into contact with hazardous materials during use, become hazardous wastes when discarded. These include empty containers, rags, protective clothing, worn-out parts, process waters, etc.

This is in accordance with the RCRA hazardous waste regulations.

- Where the chemical composition of a commercial product used during ground operations was unknown and could not be defined, the composition of similar commercial products was used to determine whether the product contained any listed hazardous materials.
- In the case where waste-producing operations are performed at a given station set under one set of conditions, and at another station set under different conditions, one of these station sets was arbitrarily selected as the waste generator. This was done to avoid duplicate accounting when the waste quantities were totalled. For instance, wastes from external tank closeout operations, which could occur at either V23 or V33, were assigned to the pseudo Station Set 99.
- When similar waste-producing operations were identified at several station sets or at several locations within a single station set, and qualitative/quantitative data were available for only one locale, comparable data (the same or a simple multiple) were used for all of the other locales where the operation could occur.
- Where waste generation data from the literature were given as a range, the high value in the range was taken for this inventory.
- Unless otherwise specified in the documents or through personal communications, it is assumed that 10 percent of all paint, insulation, ablator, etc., used during the ground operations will be wasted.
- In converting from volume to mass units (or vice versa) for mixtures of wastes with uncertain compositions, densities were estimated based upon similar waste types of known density or upon densities of the predominant component of the mix.

SECTION 4

HAZARDOUS WASTE INVENTORY

The operation of the Space Shuttle Program at VAFB in the late 1980's and early 1990's will produce significant volumes and varieties of hazardous materials. An inventory of these wastes is necessary to help comply with recent EPA hazardous waste generator regulations and to assess alternative treatment/disposal options. In addition, a portion of the inventory will be used to prepare a supplement to the final Environmental Impact Statement (EIS) for the program.

The intent of this inventory is to identify and quantify all potentially hazardous solid and liquid wastes likely to be generated at VAFB during the STS ground operations. The basic inventory was compiled on a per launch basis, from which annual, monthly, and total project waste generation was calculated. Values are reported in mass and volume units. Estimates of pollutant concentrations, where applicable, are provided in Volume II of this report. The information in the following tables can be used to estimate the quantities needed for EPA reports, and to provide a supplement to the final EIS. Additionally, these tables will form the basis for the Volume II assessment of treatment/disposal alternatives.

Table 7 is a list of the STS hazardous wastes arranged by station set. From left to right, this table shows:

- STA SET - the station set number. Note that Station Set V99 is a pseudo station set, referring to a combination of Station Sets V23 and V33 (see Section 3 for explanation). The wastes identified at V99 come from external tank closeout activities, which may occur at either V23 or V33.
- CAT - category code. This is a sorting tool for grouping wastes with similar characteristics (see Glossary).
- WASTE MATERIAL - descriptions of the projected hazardous wastes. These wastes may be individual chemicals, excess commercial formulations, or mixed wastes. Items which have been indented slightly in the tables represent the chemical constituents of mixed wastes or commercial products.

- SOL OR LIQ - solid or liquid; the projected physical state of the waste material.
- OPERATION - a brief description, where appropriate, of the particular operation producing the waste material.
- HAZ WST NO. EPA/CAL - EPA and California hazardous waste numbers. Both EPA and the State of California have issued lists of wastes that they consider to be hazardous. These are presented in 45 FR 33084-33133 (40 CFR 261) and CAC, Title 22, Division 4, Chapter 30, Article 9, respectively (see Appendices B and C). The EPA numbers will be needed to complete all of the EPA hazardous waste notification, application, and reporting forms required of all hazardous waste generators under RCRA.
- HAZ PROP. EPA/CAL - the hazardous properties of the wastes, according to EPA and California lists or definitions. This information is useful in determining waste compatibility and assessing treatment alternatives (see Glossary for the meanings of hazard codes).
- CAL COMP CLASS - California compatibility class. Special precautions are needed when managing or treating chemically incompatible wastes. The California Department of Health (Law, Regulations, and Guidelines for Handling of Hazardous Waste, February 1975) developed a set of 12 groups to generally classify incompatible hazardous waste. These incompatibility groups are also listed in 45 FR 33257-33258.

Table 8 is a listing of unit factors for generation of STS hazardous wastes. Unit factors are expressed on a per launch (baseline) and per event (contingency) basis. They are grouped alphabetically by category code for each station set. Mass and volume values are given in both metric and English units. Under the volume column (English units), liquid wastes are given in gallons, and solid wastes in cubic feet. Missing numbers indicate insufficient information to quantify a particular waste.

Baseline wastes are those which can be routinely expected during every launch cycle, and are thus expressed on a per launch basis. In some cases, a particular operation does not occur during every launch cycle, but does occur at regular, launch-related intervals. For these operations, the wastes generated are divided by the launch frequency of the operations, and are presented on an average per launch basis.

Contingency wastes are those which will be generated only sporadically from unplanned events. These include aborts, spills, special tests, etc. Contingency values are expressed as estimated quantities per event; event frequency is denoted in the table footnotes.

Table 8 is the basis for all of the tables which follow. It can be used to estimate annual, monthly, or total project hazardous waste emissions for any launch schedule. Tables 9 and 10 present the annual and average monthly hazardous waste generation for each year of the STS Program, from 1985 through 1994. Table 9 presents the data for 1985, representing 4 launches; Table 10, the data for 1986, representing 6 launches; Table 11, the data for 1987, with 10 launches; and Table 12, the monthly and annual data for the period 1988 through 1994, representing 15 launches. Only one table (Table 12) is used to show the wastes generated in 1988 to 1994, as each year is projected to have the same number (i.e., 15) of launches. In each of these tables, the average monthly generation is equal to the annual quantity divided by 12 months.

The hazardous wastes shown in Tables 9 through 12 are listed in the same order as they appear in Table 8. In these tables, only mass values are listed, and a missing number indicates an identified waste for which insufficient information was available to estimate quantities. Subtotals are presented for each category, and each year is totalled by station set.

A summary of the generation of hazardous wastes for the entire STS program is given in Table 13. Mass quantities of these wastes are presented alphabetically by category code for each station set. Both baseline and contingency quantities (monthly and annual) are given per station set. Subtotals for each station set are then added together, resulting in the total quantity of hazardous wastes generated by the STS program for the period 1985 through 1994. In addition, total quantities of all hazardous wastes are given for each category code.

TABLE 7. HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT YAFF. PAGE 1

STA	CAT ⁽¹⁾ SET	WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ.WST.NO. EPA/CAL.	HAZ.PROP ⁽²⁾ EPA /CAL.	CAL. COMP. CLASS
0 ⁽³⁾	SO	CONTAMINATED FREON	L	WASHING OF SCAPESUITS	F002 NL ⁽⁴⁾	T T	6B
17	E4	WASTEWATER FROM EWEWS	L	RINSE OF SCAPESUITS & EMERGENCY	P068 NL	H T1	3A
17	F0	DIESEL FUEL	L	POWERING OF COOLING TRAILER	D001 NL	I F	6B
17	F0	DIESEL FUEL & OIL	L	TOWING OF ORBITER BY TRACTOR	D001 NL	I F	6B
17	FS	CONTAMINATED DILUTION WATER MMH	L	EMERGENCY DILUTION OF LEAKS	P068 P068 502 502	CH T1	1A,3A,4A
17	OS	CONTAMINATED DILUTION WATER H204	L	EMERGENCY DILUTION OF LEAKS	P080 P080 548 548	H T	3A,6A
18	HF	HYDRAULIC FLUIDS	L	REPLACEMENT OF HYDRAULIC FLUID	D001 NL	iT iT	6B
19	AU	TPS ADHESIVE, RTV 566/577 PHENYL METHYL POLYSILOXANE TIN OXIDE IRON OXIDE SILICON HARDENER	S	TILE REPAIR	D001 NL NL NL NL NL	i F	6B
19	AU	EA 911 EPOXY EPOXY ZINC CHROMATE ASBESTOS MERCAPTAN DIMETHYLAMINE	L	TILE BONDING TO ORBITER	D000 NL NL U013 NL U092 281	T iT iT	6B
19	AU	EA 934 EPOXY EPOXY RESIN GLASS FIBERS ACRYLONITRILE/BUTADIEN/STYRENE ASBESTOS POLYGLYCOL DIAMINE SILANE	L	TILE BONDING TO ORBITER	D000 NL NL U013 75	T T T	6B
19	CN	SPRAYCANS OF TPS SEALER FLUORINATED SOLVENT FREON 113	S	REWATERPROOFING OF ORBITER	D003 F002 F002 NL	R P	1B
19	CH	KOROPON PRIMER CONTAM CARBS BUTYL ACETATE METHYL ETHYL KETONE	S	ORBITER TPS CAVITY PREPARATION	NL NL 136 0159 499	NL	6B

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VAFB. PAGE 2

STA	CAT ⁽¹⁾ WASTE MATERIAL SET	SOL OR LIQ	OPERATION	HAZ. WST. NO. EPA/CAL.	HAZ. PROP ⁽²⁾ /CAL.	CAL. COMP. CLASS
	TOLUENE TALC - Mg SILICATES EPOXY RESIN			U229 NL NL	738 NL	
19	CN LACQUER SPRAY CANS PIGMENT SOLIDS VEHICLE SOLIDS TOLUENE XYLENE HYDROCARBON PROPELLANT PETROLEUM DISTILLATES	S	TRACER PATTERN FABRICATION	HL HL NL NL U220 U239	HL HL NL NL 738 776	6B
19	CN ISP CONTAM CUPS & WOOD STICKS INSTANT SET POLYMER	S	TRACER PATTERN FABRICATION	HL	i	F
19	CN MARSHALL STENCIL INK SPRAYCANS XYLENE NAPTHA OTHER MATERIALS	S	REFINISH ORBITER TILE SURFACES	U239 D001 NL NL	776 HL NL	6B
19	CN LACQUER SPRAYCANS PIGMENT SOLIDS VEHICLE SOLIDS TOLUENE XYLENE HYDROCARBON PROPELLANT PETROLEUM DISTILLATES	S	REFINISH ORBITER TILE SURFACES	HL NL NL NL U220 U239	HL NL NL NL 738 776	6B
19	CN ENAMEL SPRAYCANS	S	REFINISH ORBITER TILE SURFACES	HL	HL	6B
19	CN ZINC CHROMATE PRIMER CANS	S	REFINISH ORBITER TILE SURFACES	HL	HL	6B
19	CN CONTAMINATED TARE CUPS EA 911 EPOXY EA 934 EPOXY EA 9309 EPOXY	S	TILE BONDING TO ORBITER	HL D000 D000 D000	HL HL HL	6B
19	CR RAGS WITH SOLVENTS, GREASES	S	GENERAL CLEANING	D001	i	F
19	CR SOLVENT-CONTAM CHEESECLOTH ISOPROPYL ALCOHOL METHYL ETHYL KETONE 1,1,1-TRICHLOROETHANE	S	ORBITER TPS CAVITY PREPARATION	D001 U159 F002	NL 499 NL	IT FT
19	CR MEK & IPA CONTAM CHEESECLOTH METHYL ETHYL KETONE ISOPROPYL ALCOHOL	S	CHUCK FABRICATION FOR ORB TILE	D001 U159 D001	499 396	IT TF
19	CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL	S	DENSIFICATION OF ORBITER TILES	D001 D001	396 396	IT FT

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT WAFB.

STA	CAT ⁽¹⁾	WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ.WST.NO. EPA/CAL.	HAZ.FROP ⁽²⁾ EPA/CAL.	CAL. COMP. CLASS
SET							
19	CR	TCE CONTAMINATED CHEESECLOTH 1,1,1-TRICHLORDETHANE	S	TILE REPAIR ON ORBITER	D001 HL ⁽⁴⁾ D001 HL	iT	TF
19	CR	MEK CONTAMINATED CHEESECLOTH METHYL ETHYL KETONE	S	ORBITER TILE REPAIR	D001 U159 499	iT	TF
19	CR	IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL	S	ORBITER TILE REPAIR	D001 NL 396	iT	TF
19	CR	SOLID FILM LUBRIC CONT CHSCLTH	S	TRACER PATTERN FABRICATION	D001 NL	i	F
19	CR	IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL	S	BOND TILE TO STRAIN ISOL PAD	D001 396	iT	FT
19	CR	DICHLOROMETHANE CONT CHSECLTH	S	PRESSURE PAD CLEANING	U030 262	iT	FT
19	CR	CONTAM CLOTHES, CLOTH & DEBRIS KOROPON BASE PRIMER KOROPON ACTIVATOR BERYLLIUM DUST	S	SANDING OF ET DOORS	NL F017 NL F017 NL P015 112	T	T1
19	EW	WASTEWATER FROM EEN&S	L	RINSE OF SCAPESUITS & EMERGNCY	P068 NL	H	T
19	FS	WASTEWATER FROM PAYLOAD/ORB MMH	L	RTN SPILLS-HOSE CONNECTIONS	D002 P068 502	CH	T1
19	FS	WASTE FUEL AND PRIMOL 355 ⁽⁵⁾ HYDRAZINE MMH	L	FUEL SPILL WASHDOWN SUMP	D002 U133 376 P068 502	CH	T1
19	HF	VACUUM PUMP OIL TEXACO REGAL OIL 068	L	DENSIFICATION OF ORBITER TILES	D001 NL	i	F
19	HS	FUEL SCRUBBER HYDRAZINE MMH	L	REMOVAL OF FUEL VAPORS	D002 U133 376 P068 502	CH	T1
19	HY	HYDRAZINE	L	DRAIN PAYLOADS	U133 376	RT	TIF
19	HY	HYDRAZINE	L	DRAIN 3 APU's	U133 376	RT	TIF
19	IN	POLYURETHANE FOAM	S	TILE REPAIR	D001 NL	i	F
19	IN	ALUMACAST A/B MIXTURE POLYBUTYLENE PENTAERYTHRITOL AROMATIC WHITE OIL INERT ALUMINIZED PARTICLES DIPHENYL-METHANE DIISOCYANATE POLYMERS OF DPM DIISOCYANATE	L	CHUCK FABRICATION FOR ORB TILE	D001 NL D001 NL NL NL	1A, 3A, 4A	

TABLE 7 <CONT. > HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSORT SYSTEM AT VAFB. PAGE 4

STA CAT ⁽¹⁾	WASTE MATERIAL	SOL OR LIQ	OPERATI ⁽⁴⁾	HAZ.WST.NO. EPA/CAL.	HAZ.PROP ⁽²⁾ EPA/CAL.	CAL. COMP. CLASS
19 IN	INSTANT SET POLYMER SCRAPS (IPHENYL METHANE DIISOCYANATE POLY(ALKYLENE)POLYETHER AROMATIC HYDROCARBONS)	S	TRI-JET PATTERN FABRICATION	D001 NL NL D001 NL	NL ⁽⁴⁾ NL NL	I F 6B
19 IN	SILANE/ACETIC ACID RESIDUE METHYL TRIMETHOXYSILANE ACETIC ACID	S	INITIAL WATERPROOFING OF TILE	D003 NL NL 2	CT CT	1A
19 NH	MONOMETHYL HYDRAZINE	L	DRAIN-PURGE AP'S MANIFOLD & LHS	P068 502	H TF	6B
19 NH	MONOMETHYL HYDRAZINE	L	DRAIN-PURGE FRCS MANIFLD & LHS	P068 502	H TF	6B
19 NH	MONOMETHYL HYDRAZINE ⁽⁶⁾	L	DRAIN /AP'S FUEL	P068 502	H TF	6B
19 NH	MONOMETHYL HYDRAZINE ⁽⁶⁾	L	DRAIN RAPS FUEL	P068 502	H TF	6B
19 NH	MONOMETHYL HYDRAZINE ⁽⁶⁾	L	DRAIN FRCS FUEL	P068 502	H TF	6B
19 NH	MONOMETHYL HYDRAZINE ⁽⁶⁾	L	DRAIN PBK FUEL	P068 502	H TF	6B
19 NH	WASTEWATER WITH AMMONIA	L	AMMONIA BOILER SERVICING	D002 34	C TCI	1A
19 NO	NITROGEN TETOXIDE	L	DRAIN-PURGE PBK MANIFOLDS	P080 548	H TF	6A
19 NO	NITROGEN TETROXIDE	L	DRAIN-PURGE AP'S, FRCS MANIFOLD	P080 548	H TF	6A
19 NO	NITROGEN TETOXIDE	L	DRAIN LAP3 OXIDIZER	P080 548	H TF	6A
19 NO	NITROGEN TETOXIDE	L	DRAIN RAPS OXIDIZER	P080 548	H TF	6A
19 NO	NITROGEN TETOXIDE	L	DRAIN FRCS OXIDIZER	P080 548	H TF	6A
19 NO	NITROGEN TETOXIDE	L	DRAIN PBK OXIDIZER	P080 548	H TF	6A
19 NO	NITROGEN TETOXIDE	L	DRAIN PAYLOADS OXIDIZER	P080 548	H TF	6A
19 OS	DECONTAMINATE FROM PAYLOAD/ORB H204	L	RTN SPILLS-HOSE CONNECTIONS	P080 NL H	H TF	3A,6A
19 OS	WASTE OXIDIZER AND PRIMOL 355 ⁽⁵⁾ H204	L	OXIDIZER SPILL WASHDOWN SUMP	P080 NL H	H T	3A
19 PA	KOROPON PRIMER CONT PHT BRUSHES BUTYL ACETATE TALC - Mg SILICATES EPOXY RESIN	S	ORBITER TPS CAVITY PREPARATION	F017 NL NL NL	I F	6B
19 PA	LACQUER #6-6486	L	ORBITER TILE REPAIR	D001 NL	I F	6B

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VAFB. PAGE 5

HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VAFB. PAGE 5

STA SET	CAT(1) WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ. WST. NO. EPA/CAL.	HAZ. PROP(2) EPA /CAL.	CAL. COMP. CLASS
19 PA	CONTAMINATED BRUSHES ORGANIC ZINC PRIMER ZINC CHROMATE PRIMER	S	REFINISH ORBITER TILE SURFACES	F017 NL D007	NL 777	TE T 6B
19 PA	ORGANIC ZINC PRIMER ZINC DUST BARYTES MOLYBDATE ORANGE SILICA HIGH MOLECULAR WEIGHT EPOXY CELLOSOLVE ACETATE TOLUENE METHYL ETHYL KETONE	L	REFINISH ORBITER TILE SURFACES	F017 NL NL NL NL NL NL D001 U220	NL 777 519 NL NL NL NL U220 738 U159 499	i T TF 6B
19 PA	CONTAMINATED PAINT BRUSHES EA 911 EPOXY EA 934 EPOXY EA 9309 EPOXY	S	TILE BONDING TO ORBITER	F017 NL F017 NL F017	NL 523 NL 136 137	i T TFI 6B
19 SO	DOPE & LACQUER THINNER ALIPHATIC NAPHTHA ESTER OR KETONE ISO- OR n-BUTYL ACETATE ISO- OR n-BUTYL ALCOHOL	L	ORBITER TILE REPAIR	D001 NL F005 NL F003	NL 523 NL 136 137	i T TF 4A
19 SU	WASHWATER WITH MEK METHYL ETHYL KETONE	L	SURFACE PREP FOR TILE REPAIR	U159 NL U159 499	NL 523 NL 136 137	i T TF 4A
21 EW	WASTEWATER FROM EEV'S	L	RINSE OF SCAPESUITS & EMERGENCY	P068 NL	H	T 3A, 4A
21 FS	WASTEWATER WITH MMH MMH	L	ROUTINE SPILLS CLEANUP	D002 NL P068 502	CH	TI 1A, 3A, 4A
21 HS	FUEL SCRUBBER MMH	L	REMOVAL OF FUEL VAPORS	D002 NL P068 502	CH	TI 1A, 3A, 4A
21 IN	TILE REPAIR FOAM POLYURETHANE	S	TILE REPAIR	D001 NL D001 NL	i	F 6B
21 MH	MONOMETHYL HYDRAZINE	L	AQUISITION SCREEN TEST	P068 502	H	TF 6B
21 NO	NITROGEN TETROXIDE	L	AQUISITION SCREEN TEST	P060 548	H	TF 6A
21 NO	NITROGEN TETROXIDE	L	PBK LOAD/OFF LOAD	P080 548	H	TF 6A
21 NO	NITROGEN TETROXIDE	L	RSV/TANK BLONDOWN	P080 548	H	TF 6A
21 NO	NITROGEN TETROXIDE	L	PBK LOAD/OFFLOAD SPILL	P080 548	H	TF 6A
21 OS	WASTEWATER WITH OXIDIZER ACONITE	L	DECONTAMINATE MIXTURES RTN SPL	P080 NL	H	TF 3A, 6A

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VABF. PAGE 6

STA	CAT ⁽¹⁾	WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ. WST. NO. EPA/CAL.	HAZ. PROP. ⁽²⁾ EPA /CAL.	CAL. COMP. CLASS
					P080 548		
					U159 NL ⁽⁴⁾ U159 499	LT TF	3A
N2D4				L TILE REPAIR			
21 SU	WASTEWATER WITH MEK METHYL ETHYL KETONE			S EQUIPMENT MAINTENANCE	D001 NL	i F	6B
21 UP	WASTE SEALS, FILTERS, ETC.			L RINSE OF SCAPESUITS & EMERGENCY	P068 NL	CH TI	3A, 4A
23 EU	WASTEWATER FROM EVENTS			L WASHDOWN OF EXPECTED N2H4 SPL	U133 376	RT TIF	6B
23 FS	HYDRAZINE-CONTAM. WASTEWATER HYDRAZINE			L FINAL CLEANUP OF LAUNCH MOUNT	U133 376	RT TIF	6B
23 FS	HYDRAZINE-CONTAM. CLNUP WATER HYDRAZINE			L WASHDOWN OF PPR SPILLS	U133 376	RT TIF	6B
23 FS	WASTEWATER FROM PPR HYDRAZINE			L COVERS OXID. & FUEL SPILLS	D002 NL U133 376 P068 502	CH TI	3A
23 FS	PRIMOL 355 ⁽⁵⁾ MMH HYDRAZINE			L MAINT. OF HYDRAULIC DEVICES	D001 NL D001 NL	TI TIF	6B
23 HF	HYDRAULIC FLUIDS TETRAORTHORESOL PHOSPHATE			L RECOVERY OF HYDRAZINE VAPOR	D002 NL U133 376 P068 502	CH TI	1A, 2A, 4A
23 HS	HYDRAZINE & MMH SCRUBBER MMH			L FILL SRB TYC APUs & ORB TANK	U133 376	RT TIF	6B
23 HY	HYDRAZINE			L CONTINGENCY FUEL OFFLOAD AT LP	U133 376	RT TIF	6B
23 HY	LBM PROPELLANT PARAHYDRAZINE UNSYM DIMETHYLHYDRAZINE			L CONTINGENCY FUEL OFFLOAD AT LP	U133 376 U098 285	RT TIF	6B
23 HY	HYDRAZINE			S CLOSEOUT OF SRBS	D001 NL D001 NL D001 NL	LT TF	6B
23 IN	K5NA INSULATION BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED			L FUELING OF ORBITER	P068 502	H TF	6B
23 MH	MONOMETHYL HYDRAZINE			L CONTINGENCY FUEL OFFLOAD AT LP	P068 502	H TF	6B
23 MH	MONOMETHYL HYDRAZINE			L CONTINGENCY OFFLOAD AT LP	D002 34	C TCI	1A
23 NH	AMMONIA			L LOADING OF ORBITER OXIDIZER	P080 548	H TF	6A
23 NO	NITROGEN TETROXIDE			L CONTINGENCY OFFLOAD AT LP	P080 548	H TF	6A
23 NO	LBM OXIDIZER (CONT.)						

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT YAFFB. PAGE 7

STA	CAT ⁽¹⁾ \WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ.WST.NO. EPA/CAL.	HAZ.PROP. ⁽²⁾ EPA/CAL.	CAL. COMP. CLASS
	NITROGEN TETOXIDE		P090 548			
23	H9 NITROGEN TETOXIDE	L	CONTINGENCY OFFLOAD AT LP	P080 548	H TF	6A
23	OS H204 CONTAM. CLEANUP WATER	L	FINAL CLEANUP OF LAUNCH MOUNT	P080 548	H TF	3A,6A
23	OS H204 CONTAM. WASTEWATER	L	WASHDOWN OF EXPECTED N204 SPL.	P080 548	H TF	3A,6A
23	OS H204 NITROGEN TETOXIDE	L	N204 SPILL CLEANUP	P080 548	H T	3A
23	OS PRIMOL 355 H204	S	ACCIDENT INVOLVING 1 SRB	D003 37	1TR	TPF
23	PS SRB PROPELLANT SPILL ⁽⁷⁾		AMMONIUM PERCHLORATE	D003 37		2A,6A
	AMMONIUM POWDER		ALUMINUM POWDER	D003 22		
	PBAR BINDER		HTPB BINDER	NL		
	HTPB BINDER		IRON OXIDE	NL		
32	23 QU DELUGE WATER	L	ACOUSTIC DAMPING/COOLING OF LP	D002 NL	C C	3A
	ALUMINUM OXIDE			NL		
	AMMONIA			NL		
	HYDROCHLORIC ACID			D002 381		
	ORGANIC CARBON			NL		
23	S0 SOLVENT MIXTURE	L	CLEANUP OF PCR & PPR	D001 262	T ₁	TIF
	FREON THC/MF/TF			F002 262		
	SYM. TETRACHLOROETHANE			F002 715		
23	S0 CONTAMINATED SOLVENTS	L	CLEANUP PROT COATING SPRAY EQU	D001 NL	T ₁	TIF
23	SU SOLVENT WASTEWATER UNSPEC.	L	CLEANUP OF PCR & PPR	D001 NL	CT	TC
23	SU CONTAMINATED WASTEWATER	L	REFURBISHMENT OF LP PROT COAT	D001 NL	T ₁	TF
	SOLVENTS			NL		6B
	CHLORINATED RUBBER			NL		
	ZINC PRIMER			NL		
31	AL SURFACTANT	L	SMALL PIPE CLEANING	D002 677	C	T ₁
	NaOH			677		1A
	SODIUM TRIPOLYPHOSPHATE					
31	AW EA 934 EPOXY ADHESIVE	S	BUILDUP OF SRB FOR CORK APPL.	D001 NL	T ₁	TIF
	EPOXY RESIN			D001 NL		6B
	ASBESTOS			U013 75		
	FILLERS			NL		
	POLYAMIDE			NL		
	DIETHYLENETRIAMINE			NL		
31	CA CONTAMINATED AIR FILTERS	S	FILTERING OF SPRAY BOOTH AIR	F005 NL	T ₁	TF
						6B

TABLE 7 (CONT.)

HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VAFB.

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STA	CAT ⁽¹⁾	WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ. USE EPA/CAL. L1Q	HAZ. PROP. ⁽²⁾ EPA/CAL.	CAL. COMP. CLASS
31	CA	CHARCOAL FILTER WASTES	S	FILTERING OF CURE ROOM AIR	F005	NL ⁽⁴⁾	T1
31	CA	CONTAMINATED AIR FILTERS	S	FILTERS ON ALL EXHAUST STACKS	D001	NL	T
31	CN	BOSTIK PRIMER PAINT CANS	S	SRB PAINTING	NL	NL	F
31	CN	BOSTIK TOPCOAT PAINT CANS	S	SRB PAINTING	NL	NL	6B
31	CN	RUSTOLEUM PRIMER PAINT CANS	S	SRB FWD SKT RINGS PAINTING	NL	NL	6B
31	CN	RUSTOLEUM TOPCOAT PAINT CANS	S	SRB FWD SKT RINGS PAINTING	NL	NL	6B
31	CN	MSA-1 EMPTY CONTAINERS	S	SRB INSULATION	NL	NL	6B
31	CN	K5HA CONTAINERS	S	K5HA CLOSEOUTS	NL	NL	6B
31	CN	K5HA & MTA-2 PACKING MATERIALS	S	CONTAINERS OF INSUL FOR SRBs	D001	NL	T1
31	CR	SOLVENT CONTAMINATED RAGS	S	CLEANING SRB WITH SOLVENTS	D001	NL	F
31	CR	ALODINE CONTAMINATED RAGS	S	APPLICATION OF ALODINE TO SRB	D007	NL	E
31	CR	RUMPLE CLOTHS	S	DEGREASING	F001	NL	T1
31	CR	PAINT DROP CLOTHS	S	PROT OF FLOOR DURING PAINTING	F017	NL	T1
31	EW	WASTEWATER FROM EETS	L	RINSE OF SCAPESUITS & EMERGENCY	F017	NL	T
31	FO	FUEL AND OIL SPILLS	L	RAIL TRANSPORT OF SRB	D001	NL	F
31	FO	FUEL & OIL WASTES	L	WASTES FROM IN-BUILDING OPS.	D001	NL	F
31	FS	PRIMOL 355 ⁽⁵⁾	L	HYDRAZINE SPILL CLEAN-UP	D002	376	CR
31	HS	SCRUBBER EFFLUENT	L	TVC HOT FIRE AREA SCRUBBER	D002	376	TC
31	HY	HYDRAZINE	L	SERVICING OF TVC APU	U133	376	RT
31	IN	MSA-1 (CURED) ⁽⁶⁾	S	SRB INSULATION	D001	NL	T
		ETCHCLORHYDRIN/BGE GLASS ECOSPHERES PHENOLIC MICROSPHERES GLASS FIBERS BEETONE 27 METHYLENE DIANILINE m-PHENYLENE DIAMINE			D003	NL	6B
31	IN	MSA-1, PART A (UNMIXED) ⁽⁹⁾ METHYLENE CHLORIDE (CONT.)	L	SRB INSULATION	F002	262	T1
					F002	262	TF

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT YAFF. PAGE 9

STA SET	CAT ⁽¹⁾ WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ. HST. NO. EPA/CAL.	HAZ. PROP. ⁽²⁾ EPA /CAL.	CAL. COMP. CLASS
	EPICHLORHYDRIN/BGE			D003 NL ⁽⁴⁾		
31 IN	MSA-1, PART B (UNMIXED) ⁽⁹⁾ METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIAMINE o-PHENYLENE DIAMINE ETHYL ALCOHOL PHENOLIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27	L SRB INSULATION		U210 576 F002 262 U210 576 D001 NL D001 NL NL NL NL NL NL NL NL NL	T _t TF	6B
31 IN	MSA-2 (CURED) ⁽⁸⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES	S SRB INSULATION		D001 NL D003 NL D001 NL D003 NL NL NL NL NL	T _t TF	6B
31 IN	MSA-2 (UNMIXED) ⁽⁹⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES METHYLENE CHLORIDE PERCHLOROETHYLENE	L SRB INSULATION		D001 262 D003 NL D001 NL D003 NL NL NL NL NL U210 576	T _t TF	6B
31 IN	K5HA BUTYL GLYCIDYL ETHER EPOXY RESINS	S CLOSEOUT OF SRB AFT SKT & SRM		D001 NL D001 NL D001 NL	T _t T _f	6B
31 IN	INSULATION AND PAPER	S PROT OF FLOOR DURING INSUL		D001 NL	T _t TF	6B
31 PA	BOSTIK EPOXY PRIMER EPOXY RESIN AMINE CURING AGENT TITANIUM DIOXIDE CHROMATE PIGMENTS INERT PIGMENTS SUSPENSION & FLOW CONTROL ADDI SOLVENTS	L SRB PAINTING		F017 NL D003 NL NL NL NL NL NL NL F003 NL	T _t T _f	6B
31 PA	BOSTIK EPOXY TOPCOAT EPICHLORHYDRIN/BISPHENOL A AMINE CURING AGENT COLOR PIGMENT SUSPENSION & FLOW CONTROL ADDI SOLVENTS PHOTOCHEM REACTIVE (CONT.)	L SRB PAINTING		F017 NL D001 NL NL NL NL NL F003 NL	T _t T _f	6B

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VAFB.

STA	CAT ⁽¹⁾	WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ. WST. NO. EPA/CAL.	HAZ. PROF. ⁽²⁾ EPA /CAL.	CAL. COMP. CLASS
		SOLVENTS NONPHOTOCHEM REACTIVE	L	SRB FWD SKIRT RINGS PAINTING	F005 F017	HL HL	I F
31	PA	RUSTOLEUM PRIMER SILICATES YELLOW IRON OXIDE TITANIUM DIOXIDE CALCIUM BOROSILICATE BENTONITE LINSEED PHENOLIC ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS AND ADDITIVES	L	SRB FWD SKIRT RINGS PAINTING	F017	HL HL	I F
31	PA	RUSTOLEUM TOPCOAT SILICATES TITANIUM DIOXIDE BENTONITE CLAY TINTING COLORS ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS & ADDITIVES	L	SRB FWD SKIRT RINGS PAINTING	F017	HL HL	I F
31	PA	GACOFLEX TITANIUM DIOXIDE CLAY HYPALON HYDROCARBON RESIN PERCHLOROETHYLENE 1,1,1-TRICHLOROETHANE EPOXIDIZED SOYBEAN OIL	L	SRB PAINTING	F017	HL HL	I TFI
31	PA	PAINT-SPILL ABSORBANT	L	CLEAN-UP OF PAINT SPILLS	F017	HL	T T
31	PW	ALODINE CONTAMINATED WASTEWATER CHROMIC ACID FERRICYANIDE SALT COMPLEX FLUORIDE SALT	L	RINSE OF CONTAMINATED RAGS	D007 D055 D002	198 233 345	EH TCS
31	SO	PERCHLOROETHYLENE	L	SURFACE CLEANING FOR K5NA	U210	976	T T
31	SO	TRICHLOROETHANE	L	SURFACE CLEANING FOR K5NA	F002	743	T T
31	SO	FREON 113	L	K5A-1 EQUIPMENT CLEANUP	F002	262	T T
31	SO	MSA-1 CONTAMINATED MEC1	L	K5A-1 EQUIPMENT CLEANUP	F002	576	T T
31	SO	MSA-1 CONTAM PERCHLOROETHYLENE	L	PARTS CLEANING ROOM OPERATIONS	F002	576	T T
31	SO	PERCHLOROETHYLENE	L	PARTS CLEANING ROOM OPERATIONS	F002	743	T T
31	SO	TRICHLOROETHANE	L	PARTS CLEANING ROOM OPERATIONS	F002	743	T T

TABLE 7 <CDW> HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT YAFF. PAGE 11

STA	CAT ⁽¹⁾	WASTE MATERIAL	SOL OR LIQ	OPERATION	HAZ. WST. NO. EPA/CAL.	HAZ. PROP ⁽²⁾ EPA / CAL.	CAL. COMP. CLASS
31	SO	METHYLENE CHLORIDE	L	PARTS CLEANING ROOM OPERATIONS	F002	262	T T 4A
31	SO	MTA-2 CONTAMINATED SOLVENTS	L	MTA-2 MIXING TANK CLEANUP	F005	499	Ti TF 6B
31	SO	BOSTIK CONTAMINATED SOLVENTS	L	BOSTIK EQUIPMENT CLEANUP	U159	499	iT TF 6B
31	SO	RUSTOLEUM CONTAMINATED SOLVENT	L	RUSTOLEUM EQUIPMENT CLEANUP	U159	499	iT TF 6B
32	BA	LITHIUM STORAGE BATTERIES	S	SAFING OF SRB DESTRUCT ORD	D002	705	C TC 1B, 3B, 6B
32	BA	SILVER-ZINC STORAGE BATTERIES	S	SAFING OF SRB DESTRUCT ORD	D011	705	E TC 1A, 6B
32	BA	POTASSIUM HYDROXIDE SOLUTION	L	DRAINAGE OF AG-ZN BATTERIES	D002	621	C TC 1A, 3B
32	CB	HYDRAZINE-CONTAMINATED WATER	L	FLUSHING OF AFT SKT CAT BED	D002	HL ⁽⁴⁾	C TI 3A
32	CS	CONTAMINATED SEAWATER ⁽¹⁰⁾	L	PARTIAL ONDECK PUMP OUT OF SRB	HL	HL	3A
32	CS	CONTAMINATED SEAWATER ⁽¹⁰⁾	L	DRAINAGE OF SRB INTERIOR	HL	HL	3A
32	CU	SRB FWD SKT CLEANING WASTES	L	CLEANING OF FWD SKT TP CAVITY	HL	HL	
32	EW	WASTEWATER FROM EENWS	L	RINSE OF SCAPESUITS & EMERGENCY	P068	HL	CH TI 3A, 4A
32	FO	BILGE WASTES	L	BOAT RETRIEVAL OF SPENT SRBs	D001	HL	i TF 6B
32	FO	DIESEL FUEL & OIL SPILLS	L	TRANSPORT BY TRACTOR OF SRBs	D001	HL	i F 6B
32	FS	WASTE FUEL & PRIMOL 355 ⁽⁵⁾ HYDRAZINE	L	FUEL SPILL WASHDOWN SUMP	D002	HL	C CTI 3A
32	HS	HYDRAZINE SCRUBBER EFFLUENT	L	DRAINAGE OF TYC APUs ON SRBs	U133	376	C TI 3A
32	HY	HYDRAZINE	L	DRAINAGE OF TYC APUs ON SRBs	U133	376	RT TIF 6B
32	IH	INSULATION WASTES, SOLID	S	STRIPPING OFF SRB INSULATION	D001	HL	i F 6B
		MSA-1 INSULATION MTA-2 INSULATION K5HA INSULATION PR-855 INSULATION			D001	HL	
32	IN	INSULATION CONTAM FILTERS	S	FILTER HIGH PRES WATER SPRAY	D001	HL	6B
32	IW	INSULATION-CONTAMINATED WATER	L	INSULATION STRIP W/WATER SPRAY	HL	HL	3A

TABLE 7 (CONT'D.)

HAZARDOUS CHARACTERISTICS OF WASTES GENERATED BY THE SHUTTLE TRANSPORT SYSTEM 61 YAFER PAGE 12

STA	CAT ⁽¹⁾	WASTE MATERIAL SET	SOL OR LIQ	OPERATION	HAZ. WST. NO. EPA/CAL.	HAZ. PROP. ⁽²⁾ EPA/CAL.	CAL. COMP. CLASS
32	PR	PRESERVATIVE CHEMICALS PROTECTIVE LUBRICANTS	L	PROTECTION OF SRB SEG JOINTS	D003 D003	HL ⁽⁴⁾ NL	C C 1A
32	PS	SRB SOLID PROPELLANT AMMONIUM PERCHLORATE ALUMINUM POWDER FERRIC OXIDE POLYMER & EPOXY RESIN	S	ACCID. SPILL OF RESIDUAL FUEL	D003 D003 D003 D003	NL 37 22 NL NL	R F 6B
32	SB	DETERGENT WASHWATER ⁽¹¹⁾	L	WASHING OF SRB COMPONENTS	ML	ML	3A
32	SB	POTABLE RINSE WATER	L	RINSING OF SRB COMPONENTS	ML	ML	3A
32	SB	DEIONIZED RINSE WATER	L	FINAL RINSE OF SRB COMPONENTS	ML	ML	3A
32	SI	SRB RINSE WATER	L	ONDECK RINSE OF SRB EXTERIOR	ML	ML	3A
32	SO	SOLVENTS FREON TMC/TM SOLVENTS, UNSPECIFIED	L	PREPARATION OF SRB SEG JOINTS	D001 D002 D001	262 262 NL	I F 6B
33	CA	AIR FILTERS	S	FILTERING PARTICULATES	D001	ML	I F 6B
33	EW	WASTEWATER FROM EETS	L	EMERGENCY WASHWATER	D001	NL	T T 6B
33	HF	HYDRAULIC FLUIDS	L	CHANGING HYDRAULIC FLUID	D001	ML	Ti TiF 6B
99	AW	GX-63100 ABLATOR ADHESIVE RESIN STM L 663 RESIN STM L 664 SILICA POWDER CARBON POWDER CURING AGENT L 663 CURING AGENT L 664 HEPTANE XYLENE	S	PREP FOR ABLATOR CLOSEOUTS	D001	366 NL NL NL NL NL D001 U239	I T TF 6B
99	AW	ISOCHEM POLYESTER RESIN ADHESIV STYRENE MEK PEROXIDE CATALYST DIMETHYL PHthalate	S	PREP FOR SPRAY-ON FOAM CLOSE	D003 D003 U160 U162	697 697 500 NL	I TR TPPI 6B
99	CA	FILTER	S	FILTER PARTICULATE IN CLN AREA	D001	NL	I F 6B
99	CN	SOLVENT CONTAMINATED CONTAINER SOLVENTS ⁽¹²⁾	S	SURFACE PREP FOR ET CLOSEOUT	NL D001	NL NL	6B
99	CN	PRIMER CONTAMINATED CONTAINERS	S	PRIMING FOR ET CLOSEOUTS	NL	NL	6B
99	CN	ADHESIVE CONTAMINATED CONTAINR	S	PREPARATION FOR ET CLOSEOUTS	NL	NL	6B

TABLE 7 (CONT.) HAZARDOUS CHARACTERISTICS OF WASTE GENERATED BY THE SHUTTLE TRANSPORT SYSTEM AT VAFB.

STA CAT ⁽¹⁾	WASTE MATERIAL	SOL CR LIQ	OPERATION	HAZ. NO. EPA/CAL.	HAZ. PROP. ⁽²⁾ EPA /CAL.	CAL. COMP. CLASS
99 CN	SOLVENT CONTAINERS	S	EQUIPMENT CLEANUP	HL ⁽⁴⁾	HL	
99 CN	POUR FOAM CONTAINERS	S	CONTAINERS FOR POLYOL & MDI	HL	HL	6B
99 CN	ABLATOR CONTAMINATED CONTAINER	S	ET HARD-PACKED ABLATOR CLOSEOUT	HL	HL	6B
99 CR	SOLVENT CONTAMINATED RAGS	S	SURFACE PREP FOR ET CLOSEOUT	D001	NL	1T TF 6B
99 CR	ADHESIVE CONTAMINATED RAGS	S	PREPARATION FOR ET CLOSEOUTS	D003	697	TIR TFPI 6B
99 CR	EOXY PRIMER-CONTAMINATED RAGS	S	APPL OF EPOXY PRIMER TO ET	D001	HL	1TE FTI 6B
99 IN	BX-250 FOAM (SOFT)	S	ET SPRAY-ON FOAM CLOSEOUTS	D003	500	TIR TFPI 6A
99 IN	DIPHENYL METHANE DIISOCYANATE FREON 11	S	D001 U229	NL NL	NL	
	AMINES			U160	500	
	POLYOLS			U102	HL	
	SUPER MEK PEROXIDE					
	POLYESTER RESIN					
	DIMETHYL PHthalate					
99 IN	POUR FOAM (MIXED) ⁽⁸⁾	S	ET POUR FOAM CLOSEOUT	D001	HL	1 F 6B
	POLYURETHANE					
99 IN	POUR FOAM PART A (UNMIXED) ⁽⁹⁾	L	ET POUR FOAM CLOSEOUTS	D001	HL	1 F 6B
99 IN	DIPHENYL METHANE DIISOCYANATE FREON 11			D001	HL	
	POLYOLS, AMINES			U229	NL	
99 IN	POUR FOAM PART B (UNMIXED) ⁽⁹⁾	L	ET POUR FOAM CLOSEOUTS	D001	HL	1 F 6B
	FREON 11			U229	NL	
	AMINE CATALYST					
	POLYETHER POLYOL BLEND					
99 IN	POUR FOAM CONTAMINATED PAPER	S	ET POUR FOAM CLOSEOUTS	D001	HL	1 F 6B
99 IN	SUPER LIGHT ABLATOR (I)	S	ET HAND-PACKED ABLATOR CLOSE	D001	336	1T FT 6B
	RESIN L664, PT A					
	SILICA FIBERS					
	CORK					
	PHENOLIC MICROSPHERES					
	SILICA MICROSPHERES					
	CURING AGENT					
99 IN	SUPER LIGHT ABLATOR (II)	S	HAND-PACKED ABLATOR CLOSEOUT	D001	366	1T TF 6B
	RESIN STM L664, PT A					
	CARBON POWDER					
	SILICA FIBERS					
	CORK					
	(CONT.)					

FOOTNOTES

1. See Category Codes Glossary for definition of all abbreviations.
2. See Glossary for definitions of abbreviations.
3. Station Set Zero is used for wastes from the space shuttle launches which are generated at a place other than a designated station set (e.g., SCAPE suit cleaning facility).
4. NL = not listed.
5. Primal 355 is a high-viscosity mineral oil. Usage requires a design decision and Air Force approval. Either Primal 355, another oil, or a foam will be used to prevent vaporization of spilled hypergols.
6. This waste could be off-loaded either at Station Set V19 or V21. Station Set V19 has been arbitrarily chosen.
7. This contingency could occur either at Station Set V23 or V31. Station Set V23 has been arbitrarily chosen.
8. Insulation is mixed, but not used.
9. Insulation is unmixed, but with shelf life exceeded.
10. Nature of contaminants not determined.
11. Contains unidentified surfactants and/or detergents.
12. Solvents include Freon TMC, trichloroethane, methyl ethyl ketone, and cellosolve (4).

TABLE 8. UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 1

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH			QUANTITY PER EVENT			
		KILOGRAMS	POUNDS	LITERS ⁽¹⁾	GAL OR CF	KILOGRAMS	POUNDS	VOLUME LITERS ⁽¹⁾
STA. SET=0 ⁽²⁾ CAT=50 CONTAMINATED FREON	L	2376.8 ⁽³⁾	5240.0 ⁽³⁾	1514.0 ⁽³⁾	400.0 ⁽³⁾	.0	.0	.0
SUBTOTAL FOR STA. SET 0								
SOLID		.0	.0	1514.0	400.0			
LIQUIDS		2376.8	5240.0					
SUBTOTAL		2376.8	5240.0					
STA. SET=17 CAT=EW WASTEWATER FROM EJECTS	L	2725.4 ⁽⁴⁾	6008.4 ⁽⁴⁾	2725.2 ⁽⁴⁾	720.0 ⁽⁴⁾	.0	.0	.0
STA. SET=17 CAT=FO DIESEL FUEL	L							
STA. SET=17 CAT=FO DIESEL FUEL & OIL	L					.0	.0	.0
STA. SET=17 CAT=FS CONTAMINATED DILUTION WATER	L	.0	.0	.0	.0			
MMH		.0	.0					
STA. SET=17 CAT=GS CONTAMINATED DILUTION WATER	L	.0	.0	.0	.0			
H204		.0	.0					
SUBTOTAL FOR STA. SET 17								
SOLID		2725.4	6008.4	2725.2	720.0			
LIQUIDS		6008.4						
SUBTOTAL		2725.4	6008.4	2725.2	720.0			
STA. SET=18 CAT=HF HYDRAULIC FLUIDS	L	4.3 ⁽⁵⁾	9.5 ⁽⁵⁾	9.5 ⁽⁵⁾	2.5 ⁽⁵⁾	.0	.0	.0
SUBTOTAL FOR STA. SET 18								
SOLID		.0	.0	.0	.0			
LIQUIDS		4.3	9.5	9.5	2.5			
SUBTOTAL		4.3	9.5	9.5	2.5			
STA. SET=19 CAT=AU TPS ADHESIVE, RTV 566/577	S	1.1	2.5	8.5	.3	.0	.0	.0
PHENYL METHYL POLYSILOXANE								
TIN OXIDE								
IRON OXIDE								
SILICON HARDENER								
STA. SET=19 CAT=AU (CONT.)	L							
STA. SET=19 CAT=AU ER 911 EPOXY	L							

TABLE 6 (CONT.)

UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 2

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH			QUANTITY PER EVENT			
		KILOGRAMS	POUNDS	VOLUME LITER(S)	GAL OR CF	KILOGRAMS	POUNDS	VOLUME LITER(S) ⁽¹⁾
EPOXY								
ZINC CHROMATE								
ASBESTOS								
MERCAPTAN								
DIMETHYLAMINE								
STA. SET=19 CAT=CH	L							
EA 934 EPOXY RESIN								
ASBESTOS								
STA. SET=19 CAT=CH	L							
EA 9309 EPOXY RESIN								
GLASS FIBERS								
ACRYLONITRILE/BUTADIEN/STYRENE								
ASBESTOS								
POLYACRYLIC DIAMINE								
SILANE								
STA. SET=19 CAT=CH	S							
SPRAYCANS OF TPS SEALER								
FLUORINATED SOLVENT								
FREON 113								
STA. SET=19 CAT=CH	\$							
KORDON PRIMER CONTAM CANS								
BUTYL ACETATE								
METHYL ETHYL KETONE								
TOLUENE								
TALC - Mg SILICATES								
EPOXY RESIN								
STA. SET=19 CAT=CH	\$							
LACQUER SPRAY CANS								
PIGMENT SOLIDS								
VEHICLE SOLIDS								
XYLENE								
HYDROCARBON PROPELLANT								
PETROLEUM DISTILLATES								
STA. SET=19 CAT=CH	\$							
ISP CONTAM CUPS & WOOD STICKS								
INSTANT SET POLYMER								
STA. SET=19 CAT=CH	S							
MARSHALL STENCIL INK SPRAYCANS								
XYLENE								
HAPTHA								
(CONT.)								

TABLE 6 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH BASELINE			MASS KILOGRAMS			QUANTITY PER EVENT CONTINGENCY		
		MASS KILOGRAMS	POUNDS	VOLUME LITERS(1) GAL OR CF	KILOGRAMS	POUNDS	VOLUME LITERS(1) GAL OR CF			
OTHER MATERIALS										
STA. SET=19 CAT=CN LACQUER SPRAYCANS	S	2.2 ⁽⁷⁾	4.8 ⁽⁷⁾	22.7	.8	.0	.0	.0	.0	.0
PIGMENT SOLIDS					.0	.0	.0	.0	.0	.0
VEHICLE SOLIDS					.0	.0	.0	.0	.0	.0
TOLUENE					.0	.0	.0	.0	.0	.0
XYLENE					.0	.0	.0	.0	.0	.0
HYDROCARBON PROPELLANT					.0	.0	.0	.0	.0	.0
PETROLEUM DISTILLATES					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CN ENAMEL SPRAYCANS	S	4.1 ⁽⁷⁾	9.0 ⁽⁷⁾	42.5	1.5	.0	.0	.0	.0	.0
ZINC CHROMATE PRIMER CANS	S	4.1 ⁽⁷⁾	9.0 ⁽⁷⁾	42.5	1.5	.0	.0	.0	.0	.0
STA. SET=19 CAT=CN CONTAMINATED TARE CUPS	S				.0	.0	.0	.0	.0	.0
EA 911 EPOXY					.0	.0	.0	.0	.0	.0
EA 934 EPOXY					.0	.0	.0	.0	.0	.0
FA 9309 EPOXY					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR RAGS WITH SOLVENTS, GREASES	S	4.5 ⁽⁹⁾	10.0 ⁽⁹⁾	56.6	2.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR SOLVENT-CONTAM CHEESECLOTH	S				.0	.0	.0	.0	.0	.0
ISOPROPYL ALCOHOL					.0	.0	.0	.0	.0	.0
METHYL ETHYL KETONE					.0	.0	.0	.0	.0	.0
1,1,1-TRICHLOROETHANE					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR MEK & IPA CONTAM CHEESECLOTH	S				.0	.0	.0	.0	.0	.0
METHYL ETHYL KETONE					.0	.0	.0	.0	.0	.0
ISOPROPYL ALCOHOL					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR IPA CONTAMINATED CHEESECLOTH	S				.0	.0	.0	.0	.0	.0
ISOPROPYL ALCOHOL					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR TCE CONTAMINATED CHEESECLOTH	S				.0	.0	.0	.0	.0	.0
1,1,1-TRICHLOROETHANE					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR MEK CONTAMINATED CHEESECLOTH	S				.0	.0	.0	.0	.0	.0
METHYL ETHYL KETONE					.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=CR IPA CONTAMINATED CHEESECLOTH	S				.0	.0	.0	.0	.0	.0
(CONT.)										

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH			QUANTITY PER EVENT		
		MASS KILOGRAMS	POUNDS	VOLUME (LITERS) GAL OR CF	MASS KILOGRAMS	POUNDS	VOLUME (LITERS) GAL OR CF
ISOPROPYL ALCOHOL					.0	.0	.0
STA. SET=19 CAT=CR SOLID FILM LUBRICANT CHSCLTH S					.0	.0	.0
STA. SET=19 CAT=CR IPA CONTAMINATED CHEESECLOTH S					.0	.0	.0
STA. SET=19 CAT=CR ISOPROPYL ALCOHOL					.0	.0	.0
STA. SET=19 CAT=CR DICHLORDIMETHANE CONT CHSECLTH S					.0	.0	.0
STA. SET=19 CAT=CR CONTAM CLOTHES, CLOTH & DEBRIS S					.0	.0	.0
KODAKON BASE PRIMER KODAKON ACTIVATOR BERYLLIUM DUST					.0	.0	.0
STA. SET=19 CAT=EW WASTEWATER FROM EENAS	L	3028.2 ⁽⁴⁾	6676.0 ⁽⁴⁾	3028.0 ⁽⁴⁾	800.0 ⁽⁴⁾	.0	.0
STA. SET=19 CAT=FS WASTEWATER FROM PAYLOAD/ORB MMH	L	544.3 54.4	1200.0 120.0	567.8 15.0	150.0 .0	.0	.0
STA. SET=19 CAT=FS WASTE FUEL AND PRIMOL 355 ⁽¹¹⁾ HYDRAZINE & MMH	L	36.3 1.8	80.0 4.0	37.8 1.5	10.0 .5	.0	.0
STA. SET=19 CAT=HF VACUUM PUMP OIL TEXACO REGAL OIL 968	L	4.5	10.0	4.5	1.2	.0	.0
STA. SET=19 CAT=HS FUEL SCRUBBER HYDRAZINE & MMH	L	2540.1 50.8	5600.0 112.0	2649.5 14.0	700.0 .0	.0	.0
STA. SET=19 CAT=HY HYDRAZINE	L	.0	.0	.0	4989.5 ⁽¹²⁾	11000.0 ⁽¹²⁾	4969.7 ⁽¹²⁾
STA. SET=19 CAT=HY HYDRAZINE	L	68.0	150.0	68.1	18.0	68.0 ⁽¹²⁾	150.0 ⁽¹²⁾
STA. SET=19 CAT=IN POLYURETHANE FOAM	S	4.5	10.0	416.2	14.7	.0	.0
STA. SET=19 CAT=IN ALUMACAST A/B MIXTURE (CONT.)	L	.1	.3		.0	.0	.0

TABLE 6 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH		MASS KILOGRAMS	VOLUME LITERS ¹ , GAL OR CF	KILOGRAMS	MASS POUNDS	VOLUME CONTINGENCY LITERS ¹ , GAL OR CF
			BASELINE	VOLUME					
POLYOXYPROPYLENE PENTAERYTHRITOL			0	0	0	0	0	0	0
AROMATIC WHITE OIL			0	0	0	0	0	0	0
INERT ALUMINIZED PARTICLES			0	0	0	0	0	0	0
DIPHENYL METHANE DIISOCYANATE			0	0	0	0	0	0	0
POLYMERS OF DPM & ISOCYANATE			0	0	0	0	0	0	0
STA. SET=19 CAT-IN	S	1.8 ⁽¹³⁾	4.0 ⁽¹³⁾	22.7	.8	.0	0	0	0
INSTANT SET POLYMER SCRAPS	S								
DIPHENYL METHANE DIISOCYANATE									
POLY(OKA-LEHE)POLYETHER									
AROMATIC HYDROCARBONS									
STA. SET=19 CAT-IN	S	.5	1.0	5.7	.2	.0	0	0	0
SILANE/ACETIC ACID RESIDUE									
METHYL TRIMETHOXYSTILANE									
ACETIC ACID									
STA. SET=19 CAT=MN	L	35.4	78.0	40.5	10.7	.0	0	0	0
MUNICHEMETHYL HYDRAZINE									
STA. SET=19 CAT=MH	L	9.1	20.0	10.2	2.7	.0	0	0	0
MONOMETHYL HYDRAZINE									
STA. SET=19 CAT=MH	L	18.8 ⁽¹⁵⁾	41.4 ⁽¹⁵⁾	21.6 ⁽¹⁵⁾	5.7 ⁽¹⁵⁾	214.5 ⁽¹²⁾	473.0 ⁽¹²⁾	246.0 ⁽¹²⁾	65.0 ⁽¹²⁾
MONOMETHYL HYDRAZINE ⁽¹⁴⁾									
STA. SET=19 CAT=MH	L	18.8 ⁽¹⁵⁾	41.4 ⁽¹⁵⁾	21.6 ⁽¹⁵⁾	5.7 ⁽¹⁵⁾	296.6 ⁽¹²⁾	654.0 ⁽¹²⁾	340.6 ⁽¹²⁾	90.0 ⁽¹²⁾
MONOMETHYL HYDRAZINE ⁽¹⁴⁾									
STA. SET=19 CAT=MH	L	13.3 ⁽¹⁵⁾	29.4 ⁽¹⁵⁾	15.1 ⁽¹⁵⁾	4.0 ⁽¹⁵⁾	365.6 ⁽¹²⁾	806.0 ⁽¹²⁾	416.3 ⁽¹²⁾	110.0 ⁽¹²⁾
MONOMETHYL HYDRAZINE ⁽¹⁴⁾									
STA. SET=19 CAT=MH	L	41.6 ⁽¹⁵⁾	91.8 ⁽¹⁵⁾	47.7 ⁽¹⁵⁾	12.6 ⁽¹⁵⁾	.0	0	0	0
MONOMETHYL HYDRAZINE ⁽¹⁴⁾									
STA. SET=19 CAT=MH	L	36.3 ⁽¹⁵⁾	80.0 ⁽¹⁵⁾	37.8 ⁽¹⁵⁾	10.0 ⁽¹⁵⁾	.0	0	0	0
WASTEWATER WITH AMMONIA									
STA. SET=19 CAT=NO	L	5.4	12.0	3.8	1.0	.0	0	0	0
NITROGEN TETROXIDE									
STA. SET=19 CAT=NO	L	9.8	21.6	6.8	1.8	.0	0	0	0
NITROGEN TETROXIDE									
STA. SET=19 CAT=NO	L	34.3 ⁽¹⁵⁾	75.6 ⁽¹⁵⁾	24.2 ⁽¹⁵⁾	6.4 ⁽¹⁵⁾	326.1 ⁽¹²⁾	719.0 ⁽¹²⁾	227.1 ⁽¹²⁾	60.0 ⁽¹²⁾
NITROGEN TETROXIDE									
STA. SET=19 CAT=NO	L	34.3 ⁽¹⁵⁾	75.6 ⁽¹⁵⁾	24.2 ⁽¹⁵⁾	6.4 ⁽¹⁵⁾	465.8 ⁽¹²⁾	1027.0 ⁽¹²⁾	325.5 ⁽¹²⁾	86.0 ⁽¹²⁾
NITROGEN TETROXIDE									
STA. SET=19 CAT=NO	L	23.9 ⁽¹⁵⁾	52.6 ⁽¹⁵⁾	16.7 ⁽¹⁵⁾	4.4 ⁽¹⁵⁾	572.4 ⁽¹²⁾	1262.0 ⁽¹²⁾	397.4 ⁽¹²⁾	105.0 ⁽¹²⁾
NITROGEN TETROXIDE									

TABLE 6 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT YAFB

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH BASELINE			MASS KILOGRAMS	POUNDS	QUANTITY PER EVENT CONTINGENCY			VOLUME LITERS(1) GAL OR CF	VOLUME LITERS(1) GAL OR CF
			LITERS(1)	GAL	CFS			LITERS(1)	GAL	CFS		
STA. SET=19 CAT=NO NITROGEN TETROXIDE	L	79.5 ⁽¹⁵⁾	175.2 ⁽¹⁵⁾	55.3 ⁽¹⁵⁾	14.6 ⁽¹⁵⁾	.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=NO NITROGEN TETROXIDE	L	.0	.0	.0	.0	.0	.0	8164.6 ⁽¹²⁾	18000.0 ⁽¹²⁾	5677.5 ⁽¹²⁾	1500.0 ⁽¹²⁾	
STA. SET=19 CAT=OS DECONTAMINATE FROM PAYLOAD/ORB	L	290.3 2.7	640.0 6.0	302.8 .5	80.0 .0	.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=OS WASTE OXIDIZER AND PRIMOL 355	L	37.2 2.7	82.0 6.0	37.8 .5	10.0 .0	.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=PA KOROPON PRIMER CONT PAINT BRUSHES	S	18.1 ⁽¹⁶⁾	40.0 ⁽¹⁶⁾	141.6	5.0	.0	.0	.0	.0	.0	.0	.0
BUTYL ACETATE						.0	.0	.0	.0	.0	.0	.0
TALC - MG SILICATES						.0	.0	.0	.0	.0	.0	.0
EPOXY RESIN						.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=PA LACQUER #626486	L	.6 ⁽¹⁷⁾	1.3 ⁽¹⁷⁾	.8	.2	.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=PA CONTAMINATED BRUSHES	S	1.8 ⁽¹⁶⁾	4.0 ⁽¹⁶⁾	14.2	.5	.0	.0	.0	.0	.0	.0	.0
ORGANIC ZINC PRIMER						.0	.0	.0	.0	.0	.0	.0
ZINC CHROMATE PRIMER						.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=PA ORGANIC ZINC PRIMER	L	5.7 ⁽¹⁸⁾	12.5 ⁽¹⁸⁾	5.7	1.5	.0	.0	.0	.0	.0	.0	.0
ZINC DUST						.0	.0	.0	.0	.0	.0	.0
BARYTES						.0	.0	.0	.0	.0	.0	.0
MOLYBDATE ORANGE						.0	.0	.0	.0	.0	.0	.0
SILICA						.0	.0	.0	.0	.0	.0	.0
HIGH MOLECULAR WEIGHT EPOXY						.0	.0	.0	.0	.0	.0	.0
CELLSOLVE ACETATE						.0	.0	.0	.0	.0	.0	.0
TOLUENE						.0	.0	.0	.0	.0	.0	.0
METHYL ETHYL KETONE						.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=PA CONTAMINATED PAINT BRUSHES	S	1.8 ⁽¹⁶⁾	4.0 ⁽¹⁶⁾	14.2	.5	.0	.0	.0	.0	.0	.0	.0
EA 911 EPOXY						.0	.0	.0	.0	.0	.0	.0
EA 934 EPOXY						.0	.0	.0	.0	.0	.0	.0
EA 9309 EPOXY						.0	.0	.0	.0	.0	.0	.0
STA. SET=19 CAT=SO DOPED & LACQUER THINNER	L	.8 ⁽¹⁷⁾	1.8 ⁽¹⁷⁾	.8	.2	.0	.0	.0	.0	.0	.0	.0
ALIPHATIC NAPHTHA ESTER OR KETONE						.0	.0	.0	.0	.0	.0	.0
(CONT.)						.0	.0	.0	.0	.0	.0	.0

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB PAGE 7

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH BASELINE	VOLUME LITERS(1)	GAL OR CF	MASS KILOGRAMS	POUNDS	QUANTITY PER EVENT CONTINGENCY	VOLUME LITERS(1)	GAL OR CF
ISO- OR n-BUTYL ACETATE ISO- OR n-BUTYL ALCOHOL		.2	.5			0	0	0	0	0
STA. SET=19 CAT=SU WASTEWATER WITH MEK METHYL ETHYL KETONE	L	42.4 6.1	93.5 13.5	45.4 2.0	12.0 .0	0	0	0	0	0
SUBTOTAL FOR STA. SET 19										
SOLIDS		59.6	131.4	1030.7	36.4					
LIQUIDS		6959.0	15342.0	7074.5	1829.1					
SUBTOTAL		7018.6	15473.4							
STA. SET=21 CAT=EU WASTEWATER FROM EELELS	L	2725.4 ⁽⁴⁾	6008.4 ⁽⁴⁾	2725.2 ⁽⁴⁾	720.0 ⁽⁴⁾					
STA. SET=21 CAT=FS WASTEWATER WITH MMH MMH	L	108.0	238.0	113.6	30.0	0	0	0	0	0
STA. SET=21 CAT=HS FUEL SCRUBBER MMH	L	362.9 6.6	800.0 14.6	378.5 2.0	100.0 .0	0	0	0	0	0
STA. SET=21 CAT=IN TILE REPAIR FOAM POLYURETHANE	S	4.5	10.0	416.2	14.7	0	0	0	0	0
STA. SET=21 CAT=MH MONOMETHYL HYDRAZINE	L	0	0	0	0	0	0	0	0	0
STA. SET=21 CAT=NO NITROGEN TETOXIDE	L	0	0	0	0	0	0	0	0	0
STA. SET=21 CAT=NO NITROGEN TETOXIDE	L	15.0	33.0	10.6	2.8	0	0	0	0	0
STA. SET=21 CAT=NO NITROGEN TETOXIDE	L	51.3	113.0	35.6	9.4	0	0	0	0	0
STA. SET=21 CAT=NO NITROGEN TETOXIDE	L	0	0	0	0	0	0	0	0	0
STA. SET=21 CAT=OS WASTEWATER WITH OXIDIZER H2O4	L	72.8 .5	160.4 1.2	75.7 .1	20.0 .0	0	0	0	0	0
STA. SET=21 CAT=SU WASTEWATER WITH MEK METHYL ETHYL KETONE	L	42.4 6.1	53.4 13.4	45.4 2.0	12.0 .0	0	0	0	0	0

TABLE 8 (CONT.)

UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VTFB

PAGE 8

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	MASS POUNDS	QUANTITY PER LAUNCH		QUANTITY PER EVENT				
				BASELINE	VOLUME LITERS(1)	GAL OR CF	KILOGRAMS	POUNDS	VOLUME LITERS(1)	GAL OR CF
STA. SET=21 CAT=WP WASTE SEALS, FILTERS, ETC.	S	4.5 ⁽²¹⁾	10.0 ⁽²¹⁾	283.2	10.0	.0	.0	.0	.0	.0
SUBTOTAL FOR STA. SET 21										
SOLIDS		9.1	20.0	699.4	24.7					
LIQUIDS		3377.5	7446.2	3384.5	894.2					
SUBTOTAL		3386.6	74466.2							
STA. SET=23 CAT=EW WASTEWATER FROM EEEVS	L	3026.2 ⁽⁴⁾	6676.0 ⁽⁴⁾	3026.0 ⁽⁴⁾	800.0 ⁽⁴⁾					
STA. SET=23 CAT=FS HYDRAZINE-CONTAM. WASTEWATER	L	567.9	1252.0	567.8	150.0					
HYDRAZINE		28.1	62.0		.3					
STA. SET=23 CAT=FS HYDRAZINE-CONTAM. CLHUP WATER	L	189.1	417.0	189.3	50.0					
HYDRAZINE		2.1	4.6		.5					
STA. SET=23 CAT=FS WASTEWATER FROM PPR	L	2271.1	5007.0	2271.0	600.0					
HYDRAZINE										
STA. SET=23 CAT=FS PRIMOL 355(11) HYDRAZINE	L	340.6	751.0	378.5	100.0					
MHH										
STA. SET=23 CAT=HF HYDRAULIC FLUIDS	L	393.7	868.0	378.5	100.0					
TETRAORTHOCREOSOL PHOSPHATE		393.7	868.0							
STA. SET=23 CAT=HS HYDRAZINE & MHH SCRUBBER	L	757.0 ⁽¹⁸⁾	1669.0 ⁽¹⁸⁾	757.0	200.0					
HYDRAZINE		16.8	37.0		.0					
MHH		13.2	29.0		.0					
STA. SET=23 CAT=HY HYDRAZINE	L	209.2	459.0	189.3	50.0					
STA. SET=23 CAT=HY LBM PROPELLANT	L	.0	.0	.0	.0	79376.3 ⁽²²⁾	175000.0 ⁽²²⁾	79373.3 ⁽²²⁾	20970.5 ⁽²²⁾	
PARAHYDRAZINE		.0	.0			39689.1	87500.0	39689.1	87500.0	
UNSYM DIMETHYLHYDRAZINE		.0	.0							
STA. SET=23 CAT=HY HYDRAZINE	L	.0	.0	.0	.0	5425.4 ⁽²²⁾	11961.0 ⁽²²⁾	5425.0 ⁽²²⁾	1433.3 ⁽²²⁾	
STA. SET=23 CAT=IN K5NA INSULATION (CONT.)	S	10.4	23.0	84.9	3.0	.0	.0	.0	.0	

TABLE 8 (CONT.)

UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 9

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH BASELINE			QUANTITY PER EVENT CONTINGENCY			
		MASS KILOGRAMS	POUNDS	VOLUME LITERS ⁽¹⁾	GAL OR CF	MASS KILOGRAMS	POUNDS	VOLUME LITERS ⁽¹⁾
BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED						0	0	0
STA. SET=23 CAT=MH MONOMETHYL HYDRAZINE	L	330.7	729.0	378.3	100.0	0	0	0
STA. SET=23 CAT=MH MONOMETHYL HYDRAZINE	L	0	0	0	0	12052.3 ⁽²²⁾	26571.0 ⁽²²⁾	13788.8 ⁽²²⁾
STA. SET=23 CAT=HH AMMONIA	L	0	0	0	0	47.2 ⁽²²⁾	104.0 ⁽²²⁾	61.3 ⁽²²⁾
STA. SET=23 CAT=NO NITROGEN TETOXIDE	L	183.4	404.3	123.0	32.5	0	0	0
STA. SET=23 CAT=NO LBN OXIDIZER	L	0	0	0	0	79378.3 ⁽²²⁾	175000.0 ⁽²²⁾	53254.9 ⁽²²⁾
STA. SET=23 CAT=NO NITROGEN TETOXIDE	L	0	0	0	0	79378.3 ⁽²²⁾	175000.0 ⁽²²⁾	14070.0 ⁽²²⁾
STA. SET=23 CAT=NO NITROGEN TETOXIDE	L	0	0	0	0	28129.8 ⁽²²⁾	62016.0 ⁽²²⁾	19398.9 ⁽²²⁾
STA. SET=23 CAT=OS H204 CONTAM CLEAUP WATER	L	113.4	250.0	113.6	30.0			
STA. SET=23 CAT=OS NITROGEN TETOXIDE	L	1.1	2.5		.3			
STA. SET=23 CAT=OS H204 CONTAM. WASTEWATER	L	378.3	834.0	378.5	100.0			
STA. SET=23 CAT=OS NITROGEN TETOXIDE	L	28.1	62.0		5.0			
STA. SET=23 CAT=OS PRIMOL 355 ⁽¹¹⁾ , H204	L	340.6	751.0	378.5	100.0			
STA. SET=23 CAT=PS ⁽²³⁾ SRB PROPELLANT SPILL	S	0	0	0	0	50301.3 ⁽²⁴⁾	111180.0 ⁽²⁴⁾	261436.0 ⁽²⁴⁾
AMMONIUM PERCHLORATE		0	0	0	0	351033.3	773900.0	
ALUMINUM POWDER		0	0	0	0	90648.3	177800.0	
PBAN BINDER		0	0	0	0	70578.6	155600.0	
HTPB BINDER		0	0	0	0	33.1	73.0	
IRON OXIDE		0	0	0	0	2018.5	4450.0	
STA. SET=23 CAT=QU DELUGE WATER	L	567894.6	1252000.0	567750.0	150000.0	0	0	0
ALUMINUM OXIDE		3.4	7.4			0	0	0
AMMONIA		.2	.5			0	0	0
HYDROCHLORIC ACID		362.4	799.0			0	0	0
ORGANIC CARBON		3.4	7.5			0	0	0
STA. SET=23 CAT=SO SOLVENT MIXTURE (CONT.)	L	291.5	642.6	208.2	55.0 ⁽²⁵⁾	0	0	0

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS.	QUANTITY PER LAUNCH		QUANTITY PER EVENT CONTINGENCY			VOLUME LITERS, GALLON OR CF
			BASELINE	VOLUME LITERS(1)	GAL OR CF	KILOGRAMS	POUNDS	
FREEON THC/MF/TIF SYM. TETRACHLOROETHANE	L	.0	.0	.0	.0	.0	.0	.0
STA. SET=23 CAT=SO CONTAMINATED SOLVENTS	L	264.9(26)	584.0(26)	189.3	50.0	.0	.0	.0
STA. SET=23 CAT=SU SOLVENT WASTEWATER UNSPEC.	L	416.4(18)	918.0(18)	416.3	110.0(25)	.0	.0	.0
STA. SET=23 CAT=SU CONTAMINATED WASTEWATER SOLVENTS	L	946.2(18)	2086.0(18)	946.3	250.0	.0	.0	.0
CHLORINATED RUBBER ZINC PRIMER						.0	.0	.0
SUBTOTAL FOR STA. SET 23						.0	.0	.0
SOLID LIQUIDS		578915.9 578926.3	1276297.8 1276320.8	84.9 578641.4	152877.5			
STA. SET=31 CAT=AL NaOH SODIUM TRIPOLYPHOSPHATE	L					.0	.0	.0
STA. SET=31 CAT=AM EA 934 EPOXY ADHESIVE	S	15.9(26)	35.0(26)	84.9	3.0(24)	.0	.0	.0
EPOXY RESIN		6.8	15.0			.0	.0	.0
ASBESTOS		1.8	4.0			.0	.0	.0
FILLERS		3.2	7.0			.0	.0	.0
POLYAMIDE		3.6	8.0			.0	.0	.0
DIETHYLENETRIAMINE		.5	1.0			.0	.0	.0
STA. SET=31 CAT=CA CONTAMINATED AIR FILTERS	S	22.7	50.0	1415.8(21)	50.0(21)	.0	.0	.0
STA. SET=31 CAT=CA CHARCOAL FILTER WASTES	S					.0	.0	.0
STA. SET=31 CAT=CA CONTAMINATED AIR FILTERS	S	22.7	50.0	1415.8(21)	50.0(21)	.0	.0	.0
STA. SET=31 CAT=CN BOSTIK PRIMER PAINT CANS	S	6.8(6)	15.0(6)	56.6	2.0	.0	.0	.0
STA. SET=31 CAT=CN BOSTIK TOPCOAT PAINT CANS	S	20.4(6)	45.0(6)	169.9	6.0	.0	.0	.0
STA. SET=31 CAT=CN RUSTOLEUM PRIMER PAINT CANS	S	.9(6)	2.0(6)	8.3	.0	.0	.0	.0

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAB

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH BASELINE			MASS KILOGRAMS	POUNDS	VOLUME LITERS GAL OR CF	QUANTITY PER EVENT CONTINGENCY		VOLUME LITERS(GAL OR CF)
			LITERS	GAL	CF				LITERS	GAL	
STA. SET=31 CAT=CN RUSTOLEUM TOPCOAT PAINT CANS	S	.9(6)	2.0(6)	8.5	.3	.6	.0	.0	.0	.0	.0
STA. SET=31 CAT=CH MSA-1 EMPTY CONTAINERS	S	453.6(28)	1000.0(28)	8494.8	300.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=CN K5HA CONTAINERS	S	3.4	7.5	56.6	2.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=CN K5HA & MTA-2 PACKING MATERIALS	S	2267.9(28)	5000.0(28)	42474.0	1500.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=CR SOLVENT CONTAMINATED RAGS	S	4.5(9)	10.0(9)	56.6	2.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=CR ALODINE CONTAMINATED RAGS	S	2.3(9)	5.0(9)	28.3	1.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=CR RYMPLE CLOTHS	S	4.5(9)	10.0(9)	56.6	2.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=CR PAINT DROP CLOTHS	S	6.8(9)	15.0(9)	84.9	3.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=EV WASTEWATER FROM EENBS	L	1211.3(4)	2670.4(4)	1211.2(4)	320.0(4)						
STA. SET=31 CAT=FO FUEL AND OIL SPILLS	L	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=FO FUEL & OIL WASTES	L	38.1	94.0	37.8	10.0	.0	.0	.0	.0	.0	.0
STA. SET=31, CAT=FS PRIMOL 355(1)	L	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=HS SCRUBBER EFFLUENT	L	37.6(18)	83.6(18)	37.6	10.0	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=HY HYDRAZINE	L	109.5	241.3	109.0	28.8	.0	.0	.0	.0	.0	.0
STA. SET=31 CAT=IN MSA-1 (CURED)(28) EPICHLOROHYDRIN/ICE GLASS ECOSPHERES PHENOLIC MICROSPHERES GLASS FIBERS BENTONE 27	S	90.7 36.3 19.7 32.2 4.9 3.6	200.0 60.1 23.6 70.9 8.8 6.7	1248.7	44.1(25)	.0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0	

(CONT.)

TABLE 8 (CONT.)

UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 12

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH			MASS KILOGRAMS	POUNDS	VOLUME LITERS ¹¹ , GAL OR CF	VOLUME LITERS ¹¹ , GAL OR CF	QUANTITY PER EVENT CONTINGENCY
			BASELINE	VOLUME LITERS ¹¹	GAL OR CF					
METHYLENE DIANILINE -PHENYLENE DIAMINE		3.2	7.0			.0	.0			.0
		1.3	2.9			.0	.0			.0
STA. SET-31 CAT-IN MSA-1, PART A (UNMIXED)(30) METHYLENE CHLORIDE EPICHLORHYDRIN/BCE	L					.0	.0	.0	.0	.0
STA. SET-31 CAT-IN MSA-1, PART B (UNMIXED)(30) METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIANILINE -PHENYLENE DIAMINE ETHYL ALCOHOL PHENOIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27	L					.0	.0	.0	.0	.0
STA. SET-31 CAT-IN HTA-2 CURED(29) EPICHLORHYDRIN/BCE	S	45.4	100.0	4247.4	150.0	.0	.0			.0
LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA		14.0	30.9			.0	.0			.0
STANNOUS OCTOATE PHENOIC MICROSPHERES		5.6	12.3			.0	.0			.0
		1.5	1.2			.0	.0			.0
		11.2	26.7			.0	.0			.0
STA. SET-31 CAT-IN HTA-2 (UNMIXED)(30) EPICHLORHYDRIN/BCE	L	13.6	30.0	151.4	40.0	.0	.0			.0
LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA		4.2	9.3			.0	.0			.0
STANNOUS OCTOATE PHENOIC MICROSPHERES		1.7	3.7			.0	.0			.0
METHYLENE CHLORIDE PERCHLOROETHYLENE		3.2	7.4			.0	.0			.0
		3.4	7.4			.0	.0			.0
STA. SET-31 CAT-IN K5HA BUTYL GLYCIDYL ETHER EPOXY RESINS	S	7.3	16.0	56.6	2.0	.0	.0			.0
STA. SET-31 CAT-IN INSULATION AND PAPER	S					.0	.0			.0
STA. SET-31 CAT-PA BOSTIK EPOXY PRIMER EPOXY RESIN AMINE CURING AGENT (CONT.)	L	12.2	27.0	11.4	3.0	.0	.0			.0
		1.6	3.5			.0	.0			.0
		.3	.6			.0	.0			.0

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 13

WASTE MATERIAL	QUANTITY PER LAUNCH			QUANTITY PER EVENT		
	SOL OR LIQ	KILOGRAMS	POUNDS	VOLUME LITERS(1)	GAL OR CF	MASS KILOCAMS
TITANIUM DIOXIDE	.3	.6				.0
CHROMATE PIGMENTS	.5	1.2				.0
INERT PIGMENTS	1.7	3.8				.0
SUSPENSION & FLOW CONTROL ADDI	<.1	.1				.0
SOLVENTS	7.3	16.2				.0
STA. SET=31 CAT=PA						
BOSTIK EPOXY TOPCOAT	L	16.8	37.0	15.1	4.6	.0
EPICHLORHYDRIN/BISPHENOL A		4.1	9.0			.0
AMINE CURING AGENT		.6	1.4			.0
COLOR PIGMENT		3.4	7.5			.0
SUSPENSION & FLOW CONTROL ADDI		.2	.5			.0
SOLVENTS PHOTOCHEM REACTIVE		1.6	3.5			.0
SOLVENTS HOMOPHOTOCHEM REACTIVE		6.8	15.9			.0
STA. SET=31 CAT=PA						
RUSTOLEUM PRIMER	L	3.6	8.0	3.8	1.0	.0
SILICATES		.6	1.3			.0
YELLOW IRON OXIDE		.3	.6			.0
TITANIUM DIOXIDE		.1	.2			.0
CALCIUM BOROSILICATE		.7	1.5			.0
BENTONITE		<.1	<.1			.0
LINSEED PHENOLIC ALKYL RESIN		.7	1.6			.0
ALIPHATIC HYDROCARBONS		1.2	2.6			.0
DRIERS AND ADDITIVES		.1	.2			.0
STA. SET=31 CAT=PA						
RUSTOLEUM TOPCOAT	L	3.6	8.0	3.8	1.0	.0
SILICATES		1.2	2.6			.0
TITANIUM DIOXIDE		.6	1.4			.0
BENTONITE CLAY		<.1	<.1			.0
TINTING COLORS		.1	.2			.0
ALKYL RESIN		.6	1.4			.0
ALIPHATIC HYDROCARBONS		1.1	2.4			.0
DRIERS & ADDITIVES		<.1	.1			.0
STA. SET=31 CAT=PA						
GACOFLEX	L	17.7	39.0	11.4	3.0	.0
TITANIUM DIOXIDE		1.2	2.7			.0
CLAY		1.4	3.1			.0
HYDROCARBON RESIN		1.8	3.9			.0
PERCHLOROETHYLENE		.4	.8			.0
1,1,1-TRICHLOROETHANE		8.3	18.3			.0
EPOKIDIZED SOYBEAN OIL		4.4	9.8			.0
STA. SET=31 CAT=PA						
PAINT-SPILL ABSORBANT	L	.0	.0	.0	.0	
STA. SET=31 CAT=PA						
ALODINE CONTAMINATED WASTEWATER L	151.5 ⁽¹⁸⁾	334.0 ⁽¹⁸⁾	151.4	40.0	.0	.0
(CONT.)						

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT 9AFB

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WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH			MASS KILOGRAMS	POUNDS	VOLUME LITERS(1) GAL OR CF	VOLUME LITERS(1) GAL OR CF	QUANTITY PER EVENT CONTINGENCY
			BASELINE	VOLUME LITERS(1)	GAL OR CF					
CHROMIC ACID FERRICYANIDE SALT COMPLEX FLUORIDE SALT			2.7(31)	5.9(31)		0	0	0	0	0
STA. SET=31 CAT=SD PERCHLOROETHYLENE	L	.6	1.4	.4	.1	0	0	0	0	0
STA. SET=31 CAT=SD TRICHLOROETHANE	L	.5	1.1	.4	.1	0	0	0	0	0
STA. SET=31 CAT=SD FREDH 113	L	.6	1.3	.4	.1	0	0	0	0	0
STA. SET=31 CAT=SD MSA-1 CONTAMINATED MEC1	L	1505.5	3319.0	1135.5	300.0	0	0	0	0	0
STA. SET=31 CAT=SD MSA-1 CONTAM PERCHLOROETHYLENE	L	1852.0	4083.0	1135.5	300.0	0	0	0	0	0
STA. SET=31 CAT=SD PERCHLOROETHYLENE	L	277.6	612.0	170.3	45.0	0	0	0	0	0
STA. SET=31 CAT=SD TRICHLOROETHANE	L	81.6	180.0	60.6	16.0	0	0	0	0	0
STA. SET=31 CAT=SD METHYLENE CHLORIDE	L	255.8	564.0	193.0	51.0	0	0	0	0	0
STA. SET=31 CAT=SD MTA-2 CONTAMINATED SOLVENTS	L	529.8(26)	1168.0(26)	378.5	100.0	0	0	0	0	0
STA. SET=31 CAT=SD BOSTIK CONTAMINATED SOLVENTS	L	264.9(26)	584.0(26)	189.3	50.0	0	0	0	0	0
STA. SET=31 CAT=SD RUSTOLEUM CONTAMINATED SOLVENT L		264.9(26)	584.0(26)	189.3	50.0	0	0	0	0	0
SUBTOTAL FOR STA. SET 31 SOLIDS LIQUIDS SUBTOTAL		2976.7 6649.4 9626.1	6562.5 14659.5 21222.0	59964.8 5197.2	2117.7 1373.1					
STA. SET=32 CAT=BA LITHIUM STORAGE BATTERIES	S	24.5	54.0	42.5	1.5	0	0	0	0	0
STA. SET=32 CAT=BA SILVER-ZINC STORAGE BATTERIES	S	40.8	90.0	51.0	1.8	0	0	0	0	0
STA. SET=32 CAT=BA POTASSIUM HYDROXIDE SOLUTION	L	8.7(18)	19.2(18)	8.7	2.3	0	0	0	0	0

TABLE 9 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 15

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH			QUANTITY PER EVENT			
		MASS KILOGRAMS	POUNDS	VOLUME LITERS(1)	GAL OR CF	MASS KILOGRAMS	POUNDS	VOLUME LITERS(1)
STA. SET=32 CAT=CD HYDRAZINE-CONTAMINATED WATER	L	108.9 ⁽¹⁶⁾	240.6 ⁽¹⁶⁾	113.6	30.0	.0	.0	.0
STA. SET=32 CAT=CS CONTAMINATED SEAWATER ⁽³²⁾	L	.0	.0	.0	.0	.0	.0	.0
STA. SET=32 CAT=CS CONTAMINATED SEAWATER ⁽³²⁾	L	14514.9	32000.0	15140.0	4000.0	.0	.0	.0
STA. SET=32 CAT=CV SRB FWD SKT CLEANING WASTES	L					.0	.0	.0
STA. SET=32 CAT=EW WASTEWATER FROM EENELS	L	605.6 ⁽⁴⁾	1335.2 ⁽⁴⁾	605.6 ⁽⁴⁾	160.0 ⁽⁴⁾			
STA. SET=32 CAT=FO BIGE WASTES	L					.0	.0	.0
STA. SET=32 CAT=FO DIESEL FUEL & OIL SPILLS	L	.0	.0	.0	.0			
STA. SET=32 CAT=FS WASTE FUEL & PRIMOL 355 ⁽¹¹⁾	L	.0	.0	.0	.0			
STA. SET=32 CAT=HS HYDRAZINE SCRUBBER EFFLUENT	L	181.4 ⁽¹⁶⁾	400.0 ⁽¹⁶⁾	189.3	50.0	.0	.0	.0
STA. SET=32 CAT=HY HYDRAZINE	L	1.6	3.6	.4	.0	.0	.0	.0
STA. SET=32 CAT=IN INSULATION WASTES, SOLID ⁽³³⁾	S	41.0	90.5	40.9	10.8	.0	.0	.0
NTA-1 INSULATION								
NTA-2 INSULATION								
K5HA INSULATION								
PR-855 INSULATION								
STA. SET=32 CAT=IN INSULATION CONTAM FILTERS	S	4.5 ⁽²¹⁾	10.0 ⁽²¹⁾	283.2	10.0	.0	.0	.0
STA. SET=32 CAT=IW INSULATION-CONTAMINATED WATER ⁽³³⁾	L	165291.5 ⁽¹⁶⁾	400500.0 ⁽¹⁶⁾	185313.6	48960.0	.0	.0	.0
NTA-1 INSULATION								
NTA-2 INSULATION								
K5HA INSULATION								
PR-855 INSULATION								
STA. SET=32 CAT=PR PRESERVATIVE CHEMICALS	L							
(CONT.)								

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT YAFB

PAGE 16

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	VOLUME POUNDS	VOLUME LITERS(1)	GAL OR CF	MASS KILOGRAMS	POUNDS	VOLUME LITERS(1)	GAL OR CF
PROTECTIVE LUBRICANTS									
STA. SET=32 CAT=PS SRB SOLID PROPELLANT	S	.0	.0	.0	.0	.0	.0	78.5(24)	173.0(24)
AMMONIUM PERCHLORATE		.0	.0	.0	.0	.0	.0	54.4	120.0
ALUMINUM POWDER		.0	.0	.0	.0	.0	.0	12.7	28.0
FERRIC OXIDE		.0	.0	.0	.0	.0	.0	1.5	1.6
POLYMER & EPOXY RESIN		.0	.0	.0	.0	.0	.0	10.9	24.0
STA. SET=32 CAT=SB DETERGENT WASHWATER(35)	L	34835.7	76800.0	36336.0	9600.0	.0	.0	.0	.0
STA. SET=32 CAT=SB POTABLE RINSE WATER	L	120473.5	265600.0	125662.0	33200.0	.0	.0	.0	.0
STA. SET=32 CAT=SB DEIONIZED RINSE WATER	L	56390.3	124320.0	58818.9	15540.0	.0	.0	.0	.0
STA. SET=32 CAT=S1 SRB RINSE WATER	L	21772.3	48000.0	22710.0	6000.0	.0	.0	.0	.0
STA. SET=32 CAT=SD SOLVENTS FREON TMC/TH SOLVENTS, UNSPECIFIED	L	10.6(26)	23.4(26)	7.6	2.0	.0	.0	.0	.0
SUBTOTAL FOR STA. SET 32 SOLIDS LIQUIDS SUBTOTAL		795.6 434234.5 435030.1	1754.0 957328.3 959082.3	11703.0 444916.1	413.3 117535.1				
STA. SET=33 CAT=CA AIR FILTERS	S	4.5(21)	10.0(21)	263.2	10.0	.0	.0	.0	.0
STA. SET=33 CAT=EN WASTEWATER FROM EVENTS	L	189.1	417.0	189.3	50.0				
STA. SET=33 CAT=HF HYDRAULIC FLUIDS	L					.0	.0	.0	.0
SUBTOTAL FOR STA. SET 33 SOLIDS LIQUIDS SUBTOTAL		4.5 189.1 193.7	10.0 417.0 427.0	283.2 189.3 189.3	10.0 50.0				
STA. SET=99 CAT=AM CX-6300 ABLATOR ADHESIVE RESIN STM L 663 (CONT.)	S	5.9 .6	13.0 1.3			.0	.0	.0	.0

TABLE 8 (CONT.) UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB PAGE 1?

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	VOLUME LITERS(1)	MASS KILOGRAMS	VOLUME LITERS(1)	QUANTITY PER EVENT CONTINGENCY	QUANTITY PER EVENT CONTINGENCY
RESIN STM L 664		2.2	4.3			.0	.0
SILICA POWDER		.2	.4			.0	.0
CARBON POWDER		.2	.4			.0	.0
CURING AGENT L 663		.2	.5			.0	.0
CURING AGENT L 664		<.1	.1			.0	.0
HEPTANE		2.4	5.2			.0	.0
XYLENE		.1	.3			.0	.0
STA. SET=99 CAT=AW ISOCHER POLYESTER RESIN ADHESY S		5.9	13.0			.0	.0
STYRENE						.0	.0
MEK PEROXIDE CATALYST						.0	.0
DIMETHYL PHthalate						.0	.0
STA. SET=99 CAT=CA FILTER	S					.0	.0
STA. SET=99 CAT=CN SOLVENT CONTAMINATED CONTAINER S		2.3 ⁽²⁸⁾	5.0 ⁽²⁸⁾	42.5	1.5	.0	.0
SOLVENTS ⁽³⁶⁾						.0	.0
STA. SET=99 CAT=CH PRIMER CONTAMINATED CONTAINERS S		.3 ⁽²⁸⁾	.7 ⁽²⁸⁾	5.7	.2	.0	.0
STA. SET=99 CAT=CN ADHESIVE CONTAMINATED CONTAINR S		.3 ⁽²⁸⁾	.7 ⁽²⁸⁾	5.7	.2	.0	.0
STA. SET=99 CAT=CH SOLVENT CONTAINERS S						.0	.0
STA. SET=99 CAT=CH POUR FOAM CONTAINERS S		22.7	50.0	379. ⁽²⁸⁾	13.4 ⁽²⁸⁾	.0	.0
STA. SET=99 CAT=CH ABLATOR CONTAMINATED CONTAINER S		.3 ⁽²⁸⁾	.7 ⁽²⁸⁾	5.7	.2	.0	.0
STA. SET=99 CAT=CR SOLVENT CONTAMINATED RAGS S		4.5 ⁽⁹⁾	10.6 ⁽⁹⁾	56.6	2.0	.0	.0
STA. SET=99 CAT=CR ADHESIVE CONTAMINATED RAGS S		4.5 ⁽⁹⁾	10.6 ⁽⁹⁾	56.6	2.0	.0	.0
STA. SET=99 CAT=CR EPOXY PRIMER-CONTAMINATED RAGS S		2.3 ⁽⁹⁾	5.0 ⁽⁹⁾	26.3	1.0	.0	.0
STA. SET=99 CAT=IN BX-250 FOAM (SOFI)		117.9	260.0	3681.1	130.0	.0	.0
DIPHENYL METHANE DIISOCYANATE		29.5	63.0			.0	.0
FREON 11		19.1	42.0			.0	.0
RHINES (CONT.)		10.4	23.0			.0	.0

TABLE 8 (CDNT.)

UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 16

WASTE MATERIAL	SOL OR LIQ	MASS KILOGRAMS	QUANTITY PER LAUNCH			MASS POUNDS	MASS KILOGRAMS	QUANTITY PER EVENT CONTINGENCY		
			MASS POUNDS	VOLUME LITER(S)	GAL OR CF			VOLUME LITER(S)	GAL OR CF	
POLYOLS						.0	.0			.0
SUPER MEK PEROXIDE						.0	.0			.0
POLYESTER RESIN						.0	.0			.0
DIMETHYL PHthalate						.0	.0			.0
STA. SET=99 CAT-IN POUR FOAM (MIXED) (29)	S	124.7 (37)	275.0 (37)	2775.0	98.0	.0	.0	.0	.0	.0
STA. SET=99 CAT-IN POUR FOAM PART A (UNMIXED) (30)	L	6.4	14.0	18.9	5.0	.0	.0	.0	.0	.0
DIPHENYL METHANE DIISOCYANATE		3.2	7.0			.0	.0			.0
FREON 11			4.5			.0	.0			.0
POLYOLS, AMINES		1.1	2.5			.0	.0			.0
STA. SET=99 CAT-IN POUR FOAM PART B (UNMIXED) (30)	L	6.4	14.0	18.9	5.0	.0	.0	.0	.0	.0
FREON 11		1.3	2.8			.0	.0			.0
AMINE CATALYST		.1	.3			.0	.0			.0
POLYETHER POLYOL BLEND		4.9	10.9			.0	.0			.0
STA. SET=99 CAT-IN POUR FOAM CONTAMINATED PAPER	S	1.5 (28)	3.3 (28)	311.5	11.0	.0	.0	.0	.0	.0
STA. SET=99 CAT-IN SUPER LIGHT ABILATOR (1)	S	4.5	10.0	424.7 (38)	15.0 (38)	.0	.0	.0	.0	.0
SUPER LIGHT ABILATOR (1)		2.7	5.9			.0	.0			.0
RESIN L664, PT A		.3	.6			.0	.0			.0
SILICA FIBERS		.5	1.2			.0	.0			.0
CORK		.1	.3			.0	.0			.0
PHENOLIC MICROSPHERES		.6	1.4			.0	.0			.0
SILICA MICROSPHERES		.3	.6			.0	.0			.0
CURING AGENT										
STA. SET=99 CAT-IN SUPER LIGHT ABILATOR (1)	S	4.5	10.0	424.7 (38)	15.0 (38)	.0	.0	.0	.0	.0
RESIN STM L664, PT A		1.4	3.0			.0	.0			.0
CARBON POWDER						.0	.0			.0
SILICA FIBERS						.0	.0			.0
SILICA MICROSPHERES						.0	.0			.0
PHENOLIC MICROSPHERES						.0	.0			.0
CURING AGENT STM L664, PT B		.8	1.7			.0	.0			.0
STA. SET=99 CAT-IN POUR FOAM "TRIMMINGS"	S	4.5	10.0	424.7 (38)	15.0 (.8)	.0	.0	.0	.0	.0
POLYURETHANE						.0	.0			.0
STA. SET=99 CAT-PA EPOXY PRIMER	L	<.1	.1			.0	.0	.0	.0	.0
METHYLENE ISOBUTYL KETONE						.0	.0			.0
(CONT.)										

TABLE 8 (CONT.)

UNIT GENERATION OF SHUTTLE TRANSPORT SYSTEM HAZARDOUS WASTES AT VAFB

PAGE 19

WASTE MATERIAL	SOL OR LIQ	QUANTITY PER LAUNCH			QUANTITY PER EVENT		
		NAS ^a KILOGRAMS	MASS POUNDS	VOLUME LITERS(1) GAL OR CF	MASS KILOGRAMS	POUNDS	VOLUME LITERS(1) GAL OR CF
XYLENE	L	<.1	.27	<.1	<.1	.0	.0
CYCLOHEXANONE							.0
CHROMATES							.0
INORGANIC PIGMENTS							.0
N-BUTANOL							.0
TOLUENE							.0
AMINO SILANE							.0
METHYL ETHYL KETONE							.0
STA. SET=99 CAT=PA D.C. 1200	L	<.1	.27	<.1	<.1	.0	.0
VM AND P NAPHTHA ORGANOMETALLIC SALTS							.0
STA. SET=99 CAT=SO FREON TMC	L	.1	.27	.3(27)	<.1	.0	.0
STA. SET=99 CAT=SO 1,1,1-TRICHLOROETHANE	L	.1	.27	.3(27)	<.1	.0	.0
STA. SET=99 CAT=SO MEK & CELLOSOLVE	L	12.2	26.9	15.1	4.0	.0	.0
STA. SET=99 CAT=SO HEPTANE	L	75.1	165.5	113.2	29.9	.0	.0
STA. SET=99 CAT=SO CELLOSOLVE ACETATE	L	107.0	236.0	113.2	29.9	.0	.0
STA. SET=99 CAT=SO METHYL ETHYL KETONE	L	88.4	194.9	109.8	29.0	.0	.0
STA. SET=99 CAT=SR SOLVENT REDUCER	L	.5	1.2	.4	.1	.0	.0
METHYL ETHYL KETONE CYCLOHEXANONE		.4	.8	.4	.0	.0	.0
STA. SET=99 CAT=SW SOLVENT CONTAMINATED WATER	L	81.0	178.6	113.6	30.0	.0	.0
SUBTOTAL FOR STA. SET 99		306.8	676.4	9622.2	304.5		
SOLIDS		377.3	831.9	503.0	132.9		
LIQUIDS		684.1	1508.3				
SUBTOTAL							
GRAND TOTAL, ALL STATION SETS		4162.7	9177.3	82388.2	2909.6		
SOLIDS		103509.3	2223580.5	1044184.5	275874.4		
LIQUIDS							
TOTAL		1039572.0	2223758.0				

1. Volume of solids and liquids is expressed in liters to maintain consistency in table format. Divide liters by 1,000 to obtain cubic meters of solids.
2. Station Set 7ero is used for wastes from the space shuttle launches which are generated at a place other than a designated station set (e.g., SCAPE suit cleaning facility).
3. This assumes that cleaning the SCAPE suits will require approximately 2 gallons (7.6 liters) of freon per SCAPE suit.
4. Baseline amounts are based on the assumption that each SCAPE suit at a given station set is prerinced with EEW&S water for 10 minutes at a rate of 4 gallons (15 liters) per minute once every launch cycle (20).
5. Waste is not generated every launch cycle. Amount per launch used to calculate amount per year represents an average for multiple launch cycles.
6. Paint cans are assumed to weigh 7.5 pounds per cubic foot (120 kg/m^3), or 1 pound per gallon can.
7. Spray cans are assumed to weigh 6 pounds per cubic foot (95 kg/m^3).
8. Cups and wood sticks are assumed to weigh 3 pounds per cubic foot (48 kg/m^3).
9. Contaminated rags are assumed to weigh 5 pounds per cubic foot (80 kg/m^3).
10. Contaminated clothes, cloth, and debris are assumed to weigh 2 pounds per cubic foot (32 kg/m^3).
11. Primol 355 is a high-viscosity mineral oil. Usage requires a design decision and Air Force approval. Either primol 355, another oil, or a foam will be used to prevent vaporization of spilled hypergols.
12. Contingency is a once-around abort. It is assumed that once every 2 years, independent of the number of launches, one before-launch abort and one once-around abort will occur. Values reported on a per year basis represent half the waste from an abort.
13. Density of Instant Set Polymer scraps is assumed to be 5 pounds per cubic foot (79 kg/m^3).
14. This waste could be off-loaded either at Station Set V19 or V21. Station Set V19 has been arbitrarily chosen.
15. The operation generating this waste occurs once every 5 launches. The unit factor per launch used to calculate annual quantities equals the total amount of waste generated per operation divided by 5.
16. Paint brushes are assumed to weigh 8 pounds per cubic foot (128 kg/m^3).

17. This assumes a density of 0.8 g/ml (6.7 lb/gal).
18. This assumes the density of water (1.0 g/ml; 8.3 lb/gal).
19. This assumes that the acquisition screen test which produces the wastes occurs an average of once every three launch cycles.
20. This assumes that one payload bay kit is spilled per year, independent of the number of launches.
21. Contaminated filters are assumed to weigh 1 pound per cubic foot (16 kg/m³).
22. Contingency is a before-launch abort. It is assumed that once every 2 years, independent of the number of launches, one before-launch abort and one once-around abort will occur (15). Values reported on a per year basis represent half the waste from an abort.
23. This contingency could occur either at Station Set V23 or V31. Station Set V23 has been arbitrarily chosen.
24. This contingency assumes one SRB per year is damaged and releases propellant, independent of the number of launches. Contingency amounts for an SRB propellant spill are not included in the total contingency amounts for the station set and for all wastes combined. Should this unlikely event occur, it is assumed that the propellant will spontaneously ignite and burn.
25. Volume given is amount based on number of 55-gallon drums required to hold the waste.
26. This assumes a density of solvents commonly used for STS operations.
27. This assumes that 10 percent of total amount used becomes waste (4).
28. Containers and packing materials are assumed to weigh 0.3 pounds per cubic feet.
29. Insulation is mixed, but not used.
30. Insulation is unmixed, but with the shelf life exceeded.
31. This assumes wastewater is 5 percent alodine by weight.
32. Nature of contaminants not determined.

33. This assumes that all insulations are removed with equal efficiency. Quantities ignore loss of material due to burnoff.
34. This assumes a density of 4 pounds per cubic foot (64 kg/m^3).
35. Contains unidentified surfactants and/or detergents.
36. Solvents include Freon TMC, trichloroethane, methyl ethyl ketone, and cellosolve (4).
37. Density of pour foam is assumed to be 2.8 pounds per cubic foot (45 kg/m^3).
38. Density of ablator is assumed to be 0.67 pounds per cubic foot (10.6 kg/m^3).

TABLE 9. HAZARDOUS WASTE GENERATION FOR 1985 *

PAGE 1

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 0 ⁽²⁾ CAT= SO CONTAMINATED FREON	792.3 ⁽³⁾	1746.7 ⁽³⁾	9507.2 ⁽³⁾	20960.0 ⁽³⁾
SUBTOTAL FOR SET 0	792.3	1746.7	9507.2	20960.0
STA. SET= 17 CAT= EW WASTEWATER FROM EEEVS	908.5 ⁽⁴⁾	2002.8 ⁽⁴⁾	10901.4 ⁽⁴⁾	24033.6 ⁽⁴⁾
STA. SET= 17 CAT= FO DIESEL FUEL				.0
STA. SET= 17 CAT= FO DIESEL FUEL & OIL				.0
STA. SET= 17 CAT= FS CONTAMINATED DILUTION WATER MMH	.0	.0	.0	.0
STA. SET= 17 CAT= OS CONTAMINATED DILUTION WATER N2O4	.0	.0	.0	.0
SUBTOTAL FOR SET 17	908.5	2002.8	10901.4	24033.6
STA. SET= 18 CAT= HF HYDRAULIC FLUIDS	1.4 ⁽⁵⁾	3.2 ⁽⁵⁾	17.2 ⁽⁵⁾	38.0 ⁽⁵⁾
SUBTOTAL FOR SET 18	1.4	3.2	17.2	38.0
STA. SET= 19 CAT= AV TPS ADHESIVE, RTV 566/577 PHENYL METHYL POLYSILOXANE TIN OXIDE IRON OXIDE SILICON HARDENER	.4	.8	4.5	10.0
STA. SET= 19 CAT= AV ERA 911 EPOXY (CONT.)				.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 2

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE POUNDS	YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
EPOXY						
ZINC CHROMATE						
ASBESTOS						
MERCAPTAN						
DIMETHYLAmine						
STA. SET= 19 CAT= AY EA 9309 EPOXY EPoxy RESIN	.0	.0	.0	.0	.0	.0
ASBESTOS						
STA. SET= 19 CAT= AY EA 9309 EPOXY EPoxy RESIN	.0	.0	.0	.0	.0	.0
GLASS FIBERS						
ACRYLONITRILE/BUTADIEN/STYRENE						
ASBESTOS						
POLYGLYCOL DIAMINE						
SILANE						
64 STA. SET= 19 CAT= CN SPRAYCANS OF TPS SEALER FLUORINATED SOLVENT FREON 113	2.3 (6)	5.0 (6)	27.2 (6)	60.0 (6)	.0	.0
STA. SET= 19 CAT= CN KOROPON PRIMER CONTAM CANS						
BUTYL ACETATE						
METHYL ETHYL KETONE						
TOLUENE						
TALC - Mg SILICATES						
EPoxy RESIN						
STA. SET= 19 CAT= CN LACQUER SPRAY CANS	.77	2.0 (7)	10.9 (7)	24.0 (7)	.0	.0
PIGMENT SOLIDS						
VEHICLE SOLIDS						
XYLENE						
HYDROCARBON PROPELLANT						
PETROLEUM DISTILLATES						
STA. SET= 19 CAT= CN ISP CONTAM CUPS & WOOD STICKS	.2 (8)	.5 (8)	2.7 (8)	6.0 (8)	.0	.0
INSTANT SET POLYMER						
STA. SET= 19 CAT= CN MARSHALL STENCIL INK SPRAYCANS	.1 (7)	.2 (7)	1.1 (7)	2.4 (7)	.0	.0
XYLENE (CONT.)						

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 3

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
NAPTHA				
OTHER MATERIALS				
STA. SET= 19 CAT= CN LACQUER SPRAYCANS	.7 ⁽⁷⁾	1.6 ⁽⁷⁾	8.7 ⁽⁷⁾	19.2 ⁽⁷⁾ .0 .0
PIGMENT SOLIDS				
VEHICLE SOLIDS				
TOLUENE				
XYLENE				
HYDROCARBON PROPELLANT				
PETROLEUM DISTILLATES				
STA. SET= 19 CAT= CN ENAMEL SPRAYCANS	1.4 ⁽⁷⁾	3.0 ⁽⁷⁾	16.3 ⁽⁷⁾	36.0 ⁽⁷⁾ .0 .0
ZINC CHROMATE PRIMER CANS	1.4 ⁽⁷⁾	3.0 ⁽⁷⁾	16.3 ⁽⁷⁾	36.0 ⁽⁷⁾ .0 .0
STA. SET= 19 CAT= CN CONTAMINATED TARE CUPS				
EA 911 EPOXY				
EA 934 EPOXY				
EA 9309 EPOXY				
STA. SET= 19 CAT= CR RAGS WITH SOLVENTS, GREASEES	1.5 ⁽⁹⁾	3.3 ⁽⁹⁾	18.1 ⁽⁹⁾	40.0 ⁽⁹⁾ .0 .0
SOLVENT-CONTAM CHEESECLOTH				
ISOPROPYL ALCOHOL				
METHYL ETHYL KETONE				
1,1,1-TRICHLOROETHANE				
STA. SET= 19 CAT= CR MEK & IPA CONTAM CHEESECLOTH				
METHYL ETHYL KETONE				
ISOPROPYL ALCOHOL				
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH				
TCE CONTAMINATED CHEESECLOTH				
1,1,1-TRICHLOROETHANE				
STA. SET= 19 CAT= CR MEK CONTAMINATED CHEESECLOTH				
METHYL ETHYL KETONE				

TABLE 9 <CONT. >

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 4

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0		.0
STA. SET= 19 CAT= CR SOLID FILM LUBRIC CONT CHSCLTH			.0		.0
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0		.0
STA. SET= 19 CAT= CR DICHLOROMETHANE CONT CHSECLTH			.0		.0
STA. SET= 19 CAT= CR CONTAM CLOTHES, CLOTH & DEBRIS KOROPON BASE PRIMER KOROPON ACTIVATOR BERYLLIUM DUST	1.5 ⁽¹⁰⁾	3. ⁽¹⁰⁾	18. ⁽¹⁰⁾	40.0 ⁽¹⁰⁾	.0
STA. SET= 19 CAT= EW WASTEWATER FROM EEW&S	1009.4 ⁽⁴⁾	2225.3 ⁽⁴⁾	12112.7 ⁽⁴⁾	26704.0 ⁽⁴⁾	
STA. SET= 19 CAT= FS WASTEWATER FROM PAYLOAD/ORB MMH	181.4 18.1	400.0 40.0	2177.2 217.7	4800.0 480.0	.0
STA. SET= 19 CAT= FS WASTE FUEL AND PRIMOL 35 ⁽¹¹⁾ HYDRAZINE & MMH	12.1 .6	26.7 1.3	145.1 7.3	320.0 16.0	
STA. SET= 19 CAT= HF VACUUM PUMP OIL TEXACO REGAL OIL 068	1.5	3.3	18.1	40.0	.0
STA. SET= 19 CAT= HS FUEL SCRUBBER HYDRAZINE & MMH	846.7 16.9	1866.7 37.3	10160.4 203.2	22400.0 448.0	.0
STA. SET= 19 CAT= HY HYDRAZINE	.0	.0	.0	.0	2494.7 ⁽¹²⁾
STA. SET= 19 CAT= HY HYDRAZINE	22.7	50.0	272.2	600.0	34.0 ⁽¹²⁾
STA. SET= 19 CAT= IN POLYURETHANE FOAM	1.5	3.3	18.1	40.0	.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 5

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
STA. SET= 19 CAT= IN ALUMACAST A/B MIXTURE POLYOXYPROPYLENE PENTAERYTHRITOL AROMATIC WHITE OIL INERT ALUMINIZED PARTICLES DIPHENYLMETHANE DIISOCYANATE POLYMERS OF DPM DIISOCYANATE	<.1	.1	.5 1.2 .0 .0
STA. SET= 19 CAT= IN INSTANT SET POLYMER SCRAPS DIPHENYL METHANE DIISOCYANATE POLY(OXALKYLENE)POLY(ETHER AROMATIC HYDROCARBONS	.6	1.3 ⁽¹³⁾	7.3 ⁽¹³⁾ 16.0 ⁽¹³⁾ .0 .0
STA. SET= 19 CAT= IN SILANE/ACETIC ACID RESIDUE METHYL TRIMETHOXYSILANE ACETIC ACID	.2	.3	1.8 4.0 .0 .0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	11.8	26.6	141.5 312.0 .0 .0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	3.0	6.7	36.3 80.0 .0 .0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	6.3 ⁽¹⁵⁾	13.8 ⁽¹⁵⁾	75.1 ⁽¹⁵⁾ 165.6 ⁽¹⁵⁾ 107.3 ⁽¹²⁾ 236.5 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	6.3 ⁽¹⁵⁾	13.8 ⁽¹⁵⁾	75.1 ⁽¹⁵⁾ 165.6 ⁽¹⁵⁾ 148.3 ⁽¹²⁾ 327.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	4.4 ⁽¹⁵⁾	9.8 ⁽¹⁵⁾	53.3 ⁽¹⁵⁾ 117.6 ⁽¹⁵⁾ 182.8 ⁽¹²⁾ 403.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	13.9 ⁽¹⁵⁾	30.6 ⁽¹⁵⁾	166.6 ⁽¹⁵⁾ 367.2 ⁽¹⁵⁾ .0 .0
STA. SET= 19 VAT= NH WASTEWATER WITH AMMONIA	12.1 ⁽¹⁵⁾	26.7 ⁽¹⁵⁾	145.1 ⁽¹⁵⁾ 320.0 ⁽¹⁵⁾ .0 .0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	1.8	4.0	21.6 48.0 .0 .0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	3.3	7.2	39.2 86.4 .0 .0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	11.4 ⁽¹⁵⁾	25.2 ⁽¹⁵⁾	137.2 ⁽¹⁵⁾ 302.4 ⁽¹⁵⁾ 163.1 ⁽¹²⁾ 359.5 ⁽¹²⁾

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 6

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	11.4 ⁽¹⁵⁾	25.2 ⁽¹⁵⁾	137.2 ⁽¹⁵⁾	302.4 ⁽¹⁵⁾	232.9 ⁽¹²⁾
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	8.0 ⁽¹⁵⁾	17.5 ⁽¹⁵⁾	95.4 ⁽¹⁵⁾	210.4 ⁽¹⁵⁾	286.2 ⁽¹²⁾
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	26.5 ⁽¹⁵⁾	58.4 ⁽¹⁵⁾	317.9 ⁽¹⁵⁾	700.8 ⁽¹⁵⁾	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	.0
STA. SET= 19 CAT= OS DECONTAMINATE FROM PAYLOAD/ORG H204	96.8	213.3	1161.2	2560.0	4082.3 ⁽¹²⁾
STA. SET= 19 CAT= OS WASTE OXIDIZER AND PRIMOL 355 ⁽¹¹⁾ H204	12.4	27.3	148.8	328.0	.0
STA. SET= 19 CAT= PA KOROPON PRIMER CONT PNT BRUSHES BUTYL ACETATE TALC - Mg SILICATES EPOXY RESIN	6.0 ⁽¹⁶⁾	13.3 ⁽¹⁶⁾	72.6 ⁽¹⁶⁾	160.0 ⁽¹⁶⁾	.0
STA. SET= 19 CAT= PA LACQUER #626486	.2 ⁽¹⁷⁾	.4 ⁽¹⁷⁾	2.4 ⁽¹⁷⁾	5.2 ⁽¹⁷⁾	.0
STA. SET= 19 CAT= PA CONTAMINATED BRUSHES ORGANIC ZINC PRIMER ZINC CHROMATE PRIMER	.6 ⁽¹⁶⁾	1.3 ⁽¹⁶⁾	7.3 ⁽¹⁶⁾	16.0 ⁽¹⁶⁾	.0
STA. SET= 19 CAT= PA ORGANIC ZINC PRIMER ZINC DUST EPOXYTES MOLYBDATE ORANGE SILICA HIGH MOLECULAR WEIGHT EPOXY CELLOSOLVE ACETATE TOLUENE METHYL ETHYL KETONE	1.9 ⁽¹⁸⁾	4.2 ⁽¹⁸⁾	22.7 ⁽¹⁸⁾	50.0 ⁽¹⁸⁾	.0
STA. SET= 19 CAT= PA CONTAMINATED PAINT BRUSHES EA 911 EPOXY (CONT.)	.6 ⁽¹⁶⁾	1.3 ⁽¹⁶⁾	7.3 ⁽¹⁶⁾	16.0 ⁽¹⁶⁾	.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 7

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
EA 934 EPOXY EA 9309 EPOXY					
STA.SET= 19 CAT= SO DOPE & LACQUER THINNER ALIPHATIC NAPHTHA ESTER OR KETONE ISO- OR n-BUTYL ACETATE ISO- OR n-BUTYL ALCOHOL	.3 <.1 .1 .1 <.1	.6 .1 .3 .2 .1	3.3 1.5 1.2 .9 .4	7.2 1.2 3.2 2.0 .8	.0 .0 .0 .0 .0
STA.SET= 19 CAT= SW WASHWATER WITH MEK METHYL ETHYL KETONE	14.1 2.0	31.2 4.5	169.6 24.5	374.0 54.0	.0 .0
SUBTOTAL FOR SET 19	2339.5	5157.8	28074.3	61293.6	7731.7
69					
STA.SET= 21 CAT= EW WASTEWATER FROM EEWCS	908.5 ⁽⁴⁾	2002.8 ⁽⁴⁾	10901. ⁽⁴⁾	24033.6 ⁽⁴⁾	
STA.SET= 21 CAT= FS WASTEWATER WITH MMH MMH	36.0 3.3	79.3 7.3	431.8 39.9	922.0 88.0	.0 .0
STA.SET= 21 CAT= HS FUEL SCRUBBER MMH	121.0 2.2	266.7 4.9	1451.5 26.5	3209.0 58.4	.0 .0
STA.SET= 21 CAT= IN TILE REPAIR FOAM POLYURETHANE	1.5 1.5	3.3 3.3	18.1 1E-1	40.0 40.0	.0 .0
STA.SET= 21 CAT= MM MONOMETHYL HYDRAZINE	.0	.0	.0	.0	.0
STA.SET= 21 CHT- NO NITROGEN TETOXIDE	.0	.0	.0	.0	.0
STA.SET= 21 CAT= NO NITROGEN TETOXIDE	17.1	37.7	205.0	452.0	.0
STA.SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	4898.8 ⁽²⁰⁾
STA.SET= 21 CAT= OS WASTEWATER WITH OXIDIZER (CONT.)	24.3	53.5	291.0	641.6	.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 8

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY FOUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
N204	.2	.4	2.2	4.8	
STA. SET= 21 CAT= 84 WASTEWATER WITH MEK METHYL ETHYL KETONE	14.1 2.0	31.1 4.5	169.5 24.3	373.6 53.6	.0 .0
STA. SET= 21 CAT= WP WASTE SEALS, FILTERS, ETC.	1.5 ⁽²¹⁾	3.3 ⁽²¹⁾	18.1 ⁽²¹⁾	48.0 ⁽²¹⁾	.0 .0
SUBTOTAL FOR SET 21	1128.9	2488.7	13546.4	29664.8	11430.5 25200.0
STA. SET= 23 CAT= EW WASTEWATER FROM EEWLS	1003.4	2225.3	12112.7	26704.0	
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. WASTEWATER HYDRAZINE	189.3 9.4	417.3 20.7	2271.6 112.5	5009.0 248.0	
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. CLHUP WATER HYDRAZINE	43.0 .7	139.0 1.5	756.6 8.3	1668.0 19.4	
STA. SET= 23 CAT= FS WASTEWATER FROM PPR HYDRAZINE	757.0	1669.0	9084.5	20028.0	
STA. SET= 23 CAT= FS PRIMOL 355 ⁽¹¹⁾ , MMH HYDRAZINE MMH	113.5	250.3	1362.6	3004.0	
STA. SET= 23 CAT= HF HYDRAULIC FLUIDS TETRAORTHOCRESOL PHOSPHATE	131.2 131.2	289.3 289.3	1574.9 1574.9	3472.0 3472.0	.0 .0
STA. SET= 23 CAT= HS HYDRAZINE & MMH SCRUBBER HYDRAZINE MMH	252.3 ⁽¹⁸⁾ 5.6 4.4	556.3 ⁽¹⁸⁾ 12.3 9.7	3028.2 ⁽¹⁸⁾ 67.1 52.6	6676.0 ⁽¹⁸⁾ 148.0 116.0	.0 .0
STA. SET= 23 CAT= HY HYDRAZINE	69.4	153.0	832.8	1836.0	.0 .0
STA. SET= 23 CAT= HY LBM PROPELLANT PARAHYDRAZINE (CONT.)	.0	.0	.0	39689.1 ⁽²²⁾	87500.0 ⁽²²⁾

TABLE S (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 9

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS	PAGE
UNSYM DIMETHYLHYDRAZINE	.0	.0	.0	9
STA. SET= 23 CAT= HY HYDRAZINE	.0	.0	.0	
STA. SET= 23 CAT= IN KSHA INCUBATION BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED	3.5	7.7	41.7	92.0
STA. SET= 23 CAT= MH NONMETHYL HYDRAZINE	110.2	243.0	1322.7	2916.0
STA. SET= 23 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	6026.2(22)
STA. SET= 23 CAT= NH AMMONIA	.0	.0	.0	47.2(22)
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	61.1	134.8	733.5	1617.2
STA. SET= 23 CAT= NO LBM OXIDIZER NITROGEN TETROXIDE	.0	.0	.0	39689.1(22)
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	.0	.0	.0	87500.0(22)
STA. SET= 23 CAT= OS H2O4 CONTAM. CLEANUP WATER NITROGEN TETROXIDE	37.8	83.3	.8	453.6
STA. SET= 23 CAT= OS H2O4 CONTAM. WASTEWATER NITROGEN TETROXIDE	126.1	278.0	20.7	1513.2
STA. SET= 23 CAT= OS PRIMOL 355(11), H2O4	113.5	250.3	1362.6	3336.0
STA. SET= 23 CAT= PS SRB PROPELLANT SPILL (23)	.0	.0	.0	248.0
AMMONIUM PERCHLORATE	.0	.0	.0	0
ALUMINUM POWDER	.0	.0	.0	0
PBAN BINDER	.0	.0	.0	0
HTPB BINDER	.0	.0	.0	0
IRON OXIDE	.0	.0	.0	0
STA. SET= 23 CAT= QU DELUGE WATER (CONT.)	189298.2	417333.3	2271578.5	5008000.0
				.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 10

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE MONTHLY POUNDS	YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
ALUMINUM OXIDE	1.1	2.5	13.4	29.6		
AMMONIA	1.1	.2	1.9	2.0		
HYDROCHLORIC ACID	120.8	266.3	1449.7	3196.0		
ORGANIC CARBON,	1.1	2.5	15.6	30.0		
STA. SET= 23 CAT= SO SOLVENT MIXTURE FREON TMC/NF/1 SYM. TETRACHLOROETHANE	97.2(25)	214.2(25)	1165.9(25)	2570.4(25)	.0	.0
STA. SET= 23 CAT= SO CONTAMINATED SOLVENTS	88.3(26)	194.7(26)	1059.6(26)	2336.0(26)	.0	.0
STA. SET= 23 CAT= SW SOLVENT WASTEWATER UNSPEC.	138.8(18)(25)	306.0(18)(25)	1665.6(18)(25)	3672.0(18)(25)	.0	.0
STA. SET= 23 CAT= SW CONTAMINATED WASTEWATER SOLVENTS CHLORINATED RUBBER ZINC PRIMER	315.4(16)	695.3(18)	3784.8(18)	8344.0(18)	.0	.0
SUBTOTAL FOR SET 23	192975.4	425440.3	2315705.0	5105283.0	102229.2	225378.0
STA. SET= 31 CAT= AL SURFACTANT NaOH					.0	.0
SODIUM TRIPOLYPHOSPHATE						
STA. SET= 31 CAT= AW EA 934 EPOXY ADHESIVE	5.3(26)(27)	11.7(26)(27)	63.5(26)(27)	140.0(26)(27)	.0	.0
EPOXY RESIN	2.3	5.0	27.2	60.0		
ASBESTOS	.6	1.3	7.3	16.0		
FILLERS	1.1	2.3	12.7	26.0		
POLYAMIDE	1.2	2.7	14.5	32.0		
DIETHYLENETRIAMINE	.2	.3	1.8	4.0		
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	7.6	16.7	90.7	200.0	.0	.0
STA. SET= 31 CAT= CA CHARCOAL FILTER WASTES					.0	.0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	7.6	16.7	90.7	200.0	.0	.0
STA. SET= 31 CAT= CN BOSTIK PRIMER PAINT CANS	2.3(6)	5.0(6)	27.2(6)	60.0(6)	.0	.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 11

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA.SET= 31 CAT= CN BOSTIK TOPCOAT PAINT CANS	6.8(6)	15.0(6)	81.6(6)	180.0(6)	.0	.0
STA.SET= 31 CAT= CN RUSTOLEUM PRIMER PAINT CANS	.3(6)	.7(6)	3.6(6)	8.0(6)	.0	.0
STA.SET= 31 CAT= CN RUSTOLEUM TOPCOAT PAINT CANS	.3(6)	.7(6)	3.6(6)	8.0(6)	.0	.0
STA.SET= 31 CAT= CN MSA-1 EMPTY CONTAINERS	151.2(28)	3333.3(28)	1814.4(28)	4000.0(28)	.0	.0
STA.SET= 31 CAT= CN K5HA CONTAINERS	1.1	2.5	13.6	30.0	.0	.0
STA.SET= 31 CAT= CN K5HA & MTA-2 PACKING MATERIALS	756.0(28)	1666.7(28)	9071.8(28)	20000.0(28)	.0	.0
STA.SET= 31 CAT= CR SOLVENT CONTAMINATED RAGS	1.5(9)	3.3(9)	18.1(9)	40.0(9)	.0	.0
STA.SET= 31 CAT= CR ALODINE CONTAMINATED RAGS	.8(9)	1.7(9)	9.1(9)	20.0(9)	.0	.0
STA.SET= 31 CAT= CR RYMPLE CLOTHS	1.5(9)	3.3(9)	18.1(9)	40.0(9)	.0	.0
STA.SET= 31 CAT= CR PAINT DROP CLOTHS	2.3(9)	5.0(9)	27.2(9)	60.0(9)	.0	.0
STA.SET= 31 CAT= EW WASTEWATER FROM EEW&S	403.8(4)	890.1(4)	4845.1(4)	10681.6(4)		
STA.SET= 31 CAT= FO FUEL AND OIL SPILLS	.0	.0	.0	.0		
STA.SET= 31 CAT= FO FUEL & OIL WASTES	12.7	28.0	152.4	336.0	.0	.0
STA.SET= 31 CAT= FS PRIMOL 355(11)	.0	.0	.0	.0		
STA.SET= 31 CAT= HS SCRUBBER EFFLUENT	12.5(18)	27.7(18)	150.6(18)	332.0(18)	.0	.0
STA.SET= 31 CAT= HY HYDRAZINE	36.5	80.4	437.6	965.2	.0	.0
STA.SET= 31 CAT= IN MSA-1 (CURED)(29)	30.2(25)	66.7(25)	362.9(25)	800.0(25)	.0	.0
(CONT.)						

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 12

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
EPICHLORHYDRIN/BGE GLASS ECOSPHERES PHENOLIC MICROSPHERES GLASS FIBERS BENTONE 27 METHYLENE DIANILINE m-PHENYLENE DIAMINE	12.1 3.6 10.7 1.3 1.0 2.2 1.1 1.4	26.7 7.9 23.6 2.9 16.0 2.2 2.3 1.0	145.3 42.8 128.6 16.0 12.2 12.7 28.0 5.3	320.4 94.4 263.6 35.2 26.8 28.0 11.6	.0
STA. SET= 31 CAT= IN MSA-1, PART A (UNMIXED) ⁽³⁰⁾ METHYLENE CHLORIDE EPICHLORHYDRIN/BGE					.0
STA. SET= 31 CAT= IN MSA-1, PART B (UNMIXED) ⁽³⁰⁾ METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIANILINE m-PHENYLENE DIAMINE ETHYL ALCOHOL PHENOLIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27					.0
STA. SET= 31 CAT= IN MSA-2 (CURED) ⁽²⁹⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES	15.1 4.7 4.7 1.9 .2 3.7	33.3 10.3 10.3 4.1 .4 8.2	181.4 56.1 56.1 22.3 2.2 44.8	400.0 123.6 123.6 49.2 4.8 98.8	.0
STA. SET= 31 CAT= IN MSA-2 (UNMIXED) ⁽³⁰⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES METHYLENE CHLORIDE PERCHLOROETHYLENE	4.5 1.4 1.4 .6 .1 1.1	10.0 3.1 3.1 1.2 .1 2.5	54.4 16.9 16.9 6.7 .7 13.4	120.0 37.2 37.2 14.8 1.6 29.6	.0
STA. SET= 31 CAT= IN K5NA BUTYL GLYCIDYL ETHER EPOXY RESINS	2.4	5.3	29.0	64.0	.0
STA. SET= 31 CAT= IN INSULATION AND PAPER					.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 13

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	BASELINE POUNDS	KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 31 CAT= PA BOSTIK EPOXY PRIMER EPOXY RESIN AMINE CURING AGENT TITANIUM DIOXIDE CHROMATE PIGMENTS INERT PIGMENTS SUSPENSION & FLOW CONTROL ADDI SOLVENTS	.1 .5 .1 .1 .2 .2 .6 <.1 2.4	9.0 1.2 .2 .2 .4 .4 1.3 <.1 5.4	49.0 6.4 1.1 1.1 2.2 2.2 6.9 .2 29.4	108.0 14.0 2.4 2.4 4.8 4.8 15.2 .4 64.8	.0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	
STA. SET= 31 CAT= PA BOSTIK EPOXY TOPCOAT EPICHLORHYDRIN/BISPHENOL A AMINE CURING AGENT COLOR PIGMENT SUSPENSION & FLOW CONTROL ADDI SOLVENTS PHOTOCHEM REACTIVE SOLVENTS NONPHOTOCHEM REACTIVE	5.6 1.4 .2 1.1 .1 .5 2.3	12.3 3.0 .5 2.5 .2 1.2 5.0	67.1 16.3 2.5 13.6 1.9 6.4 27.2	148.0 36.0 5.6 30.0 2.0 14.0 60.0	.0 0 0 0 0 0 0	0 0 0 0 0 0 0	
STA. SET= 31 CAT= PA RUSTOLEUM PRIMER SILICATES YELLOW IRON OXIDE TITANIUM DIOXIDE CALCIUM BOROSILICATE BENTONITE LINSEED PHENOLIC ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS AND ADDITIVES	1.2 .2 .1 <.1 .2 <.1 .2 .4 <.1	2.7 .4 .2 .1 .5 <.1 .5 .9 .1	14.5 2.4 1.1 .4 2.7 1.1 2.9 4.7 .4	32.0 5.2 2.4 .8 6.0 .2 6.4 10.4 .8	.0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	
STA. SET= 31 CAT= PA RUSTOLEUM TOPCOAT SILICATES TITANIUM DIOXIDE BENTONITE CLAY TINTING COLORS ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS & ADDITIVES	1.2 .4 .2 <.1 -> -> -> ->	2.7 .9 .5 <.1 -> -> -> ->	14.5 4.7 2.5 1.1 -> -> -> ->	32.0 10.4 5.6 2.2 -> -> -> ->	.0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
STA. SET= 31 CAT= PA GACOFLEX TITANIUM DIOXIDE CLAY HYPALON HYDROCARBON RESIN PERCHLOROETHYLENE 1,1,1-TRICHLOROETHANE (CONT.)	5.9 .4 .5 .6 .1 2.8 1.5	13.0 .9 1.0 1.3 .3 6.1 3.3	70.8 4.9 5.6 7.1 1.5 33.2 17.8	156.0 10.8 12.4 15.6 3.2 73.2 39.2	.0 0 0 0 0 0 0	0 0 0 0 0 0 0	

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 14

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
EPOXIDIZED SOYBEAN OIL	.1	.1	.7	1.6
STA.SET= 31 CAT= PA PAINT-SPILL ABSORBANT	.0	.0	.0	.0
STA.SET= 31 CAT= PU ALODINE CONTAMINATED WASTEWATER	50.5 ⁽¹⁸⁾ .9(31)	111.3 ⁽¹⁸⁾ 2.0(31)	606.0 ⁽¹⁸⁾ 10.7(31)	1336.0 ⁽¹⁸⁾ 23.6(31)
CHROMIC ACID FERRICYANIDE SALT COMPLEX FLUORIDE SALT	.5 <.1	1.1 <.1	6.0 .2	13.2 .4
STA.SET= 31 CAT= SO PERCHLOROETHYLENE	.2	.5	2.5	5.6
STA.SET= 31 CAT= SO TRICHLOROETHANE	.2	.4	2.0	4.4
STA.SET= 31 CAT= SO FREON 113	.2	.4	2.4	5.2
STA.SET= 31 CAT= SO MSA-1 CONTAMINATED MECI	501.8	1106.3	6021.9	13276.0
STA.SET= 31 CAT= SO MSA-1 CONTAM PERCHLOROETHYLENE	617.3	1361.0	7408.0	16332.0
STA.SET= 31 CAT= SO PERCHLOROETHYLENE	92.5	204.0	1110.4	2448.0
STA.SET= 31 CAT= SO TRICHLOROETHANE	27.2	60.0	326.6	720.0
STA.SET= 31 CAT= SO METHYLENE CHLORIDE	85.3	188.0	1023.3	2256.0
STA.SET= 31 CAT= SO MTA-2 CONTAMINATED SOLVENTS	176.6 ⁽²⁶⁾	389.3 ⁽²⁶⁾	2119.2 ⁽²⁶⁾	4672.0 ⁽²⁶⁾
STA.SET= 31 CAT= SO BOSTIK CONTAMINATED SOLVENTS	88.3 ⁽²⁶⁾	194.7 ⁽²⁶⁾	1059.6 ⁽²⁶⁾	2336.0 ⁽²⁶⁾
SUBTOTAL FOR SET 31	3208.7	7074.0	38504.4	84888.0
STA.SET= 32 CAT= BA LITHIUM STORAGE BATTERIES	8.2	18.0	98.0	216.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 15

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
STA. SET= 32 CAT= BA SILVER-ZINC STORAGE BATTERIES	13.6	30.0	163.3
STA. SET= 32 CAT= BA POassium HYDROXIDE SOLUTION	2.9 ⁽¹⁶⁾	6.4 ⁽¹⁶⁾	34.8 ⁽¹⁶⁾
STA. SET= 32 CAT= CB HYDRAZINE-CONTAMINATED WATER	36.3 ⁽¹⁹⁾	80.0 ⁽¹⁸⁾	435.4 ⁽¹⁸⁾
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER(32)	.0	.0	.0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER(32)	4839.3	10666.7	58059.5
STA. SET= 32 CAT= CW SRB FUD SKT CLEANING WASTES		128000.0	.0
STA. SET= 32 CAT= EW WASTEWATER FROM EENCS	201.9 ⁽⁴⁾	445.1 ⁽⁴⁾	2422.5 ⁽⁴⁾
STA. SET= 32 CAT= FO BILGE WASTES			.0
STA. SET= 32 CAT= FO DIESEL FUEL & OIL SPILLS	.0	.0	.0
STA. SET= 32 CAT= FS WASTE FUEL & PRIMOL 355 ⁽¹¹⁾ HYDRAZINE	.0	.0	.0
STA. SET= 32 CAT= HS HYDRAZINE SCRUBBER EFFLUENT HYDRAZINE	60.5 ⁽¹⁸⁾ .5	133.3 ⁽¹⁸⁾ 1.2	725.7 ⁽¹⁸⁾ 6.5
STA. SET= 32 CAT= HY HYDRAZINE	13.7	30.2	164.2
STA. SET= 32 CAT= IN INSULATION WASTES, SOLID ⁽³³⁾	241.9 ⁽³⁴⁾	533.3 ⁽³⁴⁾	2903.0 ⁽³⁴⁾
MSA-1 INSULATION HTA-2 INSULATION K5NA INSULATION PR-855 INSULATION			6400.0 ⁽³⁴⁾
STA. SET= 32 CAT= IN INSULATION CONTAIN FILTERS	1.5 ⁽²¹⁾	3.3 ⁽²¹⁾	16.1 ⁽²¹⁾
STA. SET= 32 CAT= IV INSULATION-CONTAMINATED WATER ⁽³³⁾	61763.8 ⁽¹⁶⁾	136166.7 ⁽¹⁸⁾	741166.0 ⁽¹⁸⁾
(CONT.)			.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 16

WASTE MATERIAL	BASELINE KILOGRAMS	MONTHLY POUNDS	BASELINE KILOGRAMS	YEARLY POUNDS	CONTINGENCY KILOGRAMS	PER YEAR POUNDS
MSA-1 INSULATION						
MTA-2 INSULATION						
K5HA INSULATION						
PR-855 INSULATION						
STA. SET= 32 CAT= PR PRESERVATIVE CHEMICALS PROTECTIVE LUBRICANTS						
STA. SET= 32 CAT= PS SRB SOLID PROPELLANT	.0	.0	.0	.0	.0	.0
AMMONIUM PERCHLORATE	.0	.0	.0	.0	.0	.0
ALUMINUM POWDER	.0	.0	.0	.0	.0	.0
FERRIC OXIDE	.0	.0	.0	.0	.0	.0
POLYMER & EPOXY RESIN	.0	.0	.0	.0	.0	.0
STA. SET= 32 CAT= SB DETERGENT WASHWATER(35)	11611.9	25600.0	139342.8	307200.0	.0	.0
STA. SET= 32 CAT= SB POTABLE RINSE WATER	40157.8	98533.3	491994.0	1062400.0	.0	.0
STA. SET= 32 CAT= SB DEIONIZED RINSE WATER	18796.8	41440.0	225561.2	497280.0	.0	.0
STA. SET= 32 CAT= SI SRB RINSE WATER	72257.4	16000.0	87089.3	192000.0	.0	.0
STA. SET= 32 CAT= SO SOLVENTS FREON TMC/TM SOLVENTS, UNSPECIFIED	3.5 ⁽²⁶⁾	7.8 ⁽²⁶⁾	42.5 ⁽²⁶⁾	93.6 ⁽²⁶⁾	.0	.0
SUBTOTAL FOR SET 32	145010.0	319694.1	1740120.5	3836329.0	.0	.0
STA. SET= 33 CAT= CA AIR FILTERS	1.5 ⁽²¹⁾	3.3 ⁽²¹⁾	18.1 ⁽²¹⁾	40.0 ⁽²¹⁾	.0	.0
STA. SET= 33 CAT= EU WASTEWATER FROM EEW&S	63.0	139.0	756.6	1668.0	.0	.0
STA. SET= 33 CAT= HF HYDRAULIC FLUIDS						
SUBTOTAL FOR SET 33	64.6	142.3	774.7	1708.0	.0	.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 17

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY POUNDS
STA.SET= 99 CAT= AW GX-6300 ABLATOR ADHESIVE RESIN STM L 663	.2	4.3	23.6	52.0	.0	.0
RESIN STM L 664	.7	1.6	8.7	19.2		
SILICA POWDER	.1	.1	.7	1.6		
CARBON POWDER	.1	.1	.7	1.6		
CURING AGENT L 663	.1	.2	.9	2.0		
CURING AGENT L 664	<.1	<.1	.2	.4		
HEPTANE	.8	1.7	9.4	20.8		
XYLENE	<.1	.1	.5	1.2		
STA.SET= 99 CAT= AW ISOCHEN POLYESTER RESIN ADHESIV STYRENE	2.0	4.3	23.6	52.0	.0	.0
MEK PEROXIDE CATALYST						
DIMETHYL PHTHALATE						
STA.SET= 99 CAT= CA FILTER					.0	.0
STA.SET= 99 CAT= CH SOLVENT CONTAMINATED CONTAINER	.8(28)	1.7(28)	9.1(28)	20.0(28)	.0	.0
SOLVENTS(36)						
STA.SET= 99 CAT= CH PRIMER CONTAMINATED CONTAINERS	.1(28)	.2(28)	1.3(28)	2.8(28)	.0	.0
STA.SET= 99 CAT= CN ADHESIVE CONTAMINATED CONTAINR	.1(28)	.2(28)	1.3(28)	2.8(28)	.0	.0
STA.SET= 99 CAT= CN SOLVENT CONTAINERS					.0	.0
STA.SET= 99 CAT= CN POUR FOAM CONTAINERS	7.6(28)	16.7(28)	90.7(28)	200.0(28)	.0	.0
STA.SET= 99 CAT= CN ABLATOR CONTAMINATED CONTAINER	.1(28)	.2(28)	1.3(28)	2.8(28)	.0	.0
STA.SET= 99 CAT= CR SOLVENT CONTAMINATED RAGS	1.5(9)	3.3(9)	18.1(9)	40.0(9)	.0	.0
STA.SET= 99 CAT= CR ADHESIVE CONTAMINATED RAGS	1.5(9)	3.3(9)	18.1(9)	40.0(9)	.0	.0
STA.SET= 99 CAT= CR EPOXY PRIMER-CONTAMINATED RAGS	.8(9)	1.7(9)	9.1(9)	20.0(9)	.0	.0
STA.SET= 99 CAT= IN BX-250 FOAM (SOIFI)	39.3	86.7	471.7	1040.0	.0	.0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 18

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR POUNDS
DIPHENYL METHANE DIISOCYANATE	9.8	21.7	117.9
FREON 11	6.4	14.0	76.2
AMINES	3.5	7.7	41.7
POLYOLS			92.0
SUPER NEK PEROXIDE			
POLYESTER RESIN			
DIMETHYL PHthalate			
STA. SET# 99 CAT# IN FOUR FOAM (MIXED)(29) POLYURETHANE	41.6 ⁽³⁷⁾	91.7 ⁽³⁷⁾	498.9 ⁽³⁷⁾ 1100.0 ⁽³⁷⁾ .0 .0
STA. SET# 99 CAT# IN POUR FOAM PART A (UNMIXED) ⁽³⁰⁾ DIPHENYL METHANE DIISOCYANATE	2.1	4.7	25.4
FREON 11	1.1	2.3	12.7
POLYOLS, AMINES	.7	1.5	8.2
	.4	.8	4.5
STA. SET# 99 CAT# IN POUR FOAM PART B (UNMIXED) ⁽³⁰⁾	2.1	4.7	25.4
FREON 11	.4	.9	5.1
AMINE CATALYST	<.1	.1	1.5
POLYETHER POLYOL BLEND	1.6	3.6	19.8
			43.6
STA. SET# 99 CAT# IN POUR FOAM CONTAMINATED PAPER	.5 ⁽²⁸⁾	1.1 ⁽²⁸⁾	6.0 ⁽²⁸⁾ 13.2 ⁽²⁸⁾ .0 .0
STA. SET# 99 CAT# IN SUPER LIGHT ABLATOR (1)	1.5	3.3	18.1
RESIN STM L664, PT A	.9	2.0	10.7
SILICA FIBERS	.1	.2	1.1
CORK	.2	.4	2.2
PHENOLIC MICROSPHERES	<.1	.1	.5
SILICA MICROSPHERES	.2	.5	2.5
CURING AGENT	.1	.2	1.1
			2.4
STA. SET# 99 CAT# IN SUPER LIGHT ABLATOR (11)	1.5	3.3	18.1
RESIN STM L664, PT A	.5	1.0	5.4
CARBON POWDER			12.0
SILICA FIBERS			
CORK			
SILICA MICROSPHERES			
PHENOLIC MICROSPHERES			
CURING AGENT STM L664, PT B	.3	.6	3.1
			6.8
STA. SET# 99 CAT# IN POUR FOAM "TRIMMING"	1.5	3.3	18.1
POLYURETHANE			40.0 .0 .0

TABLE 9 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 19

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA.SET= 99 CAT= PA EPOXY PRIMER	<.1 (27)	<.1 (27)	.2 (27)	.4 (27)	.4 (27)	.0
METHYLENE ISOBUTYL KETONE						
XYLENE						
CYCLOHEXANONE						
CHROMATES						
INORGANIC PIGMENTS						
N-BUTANOL						
TOLUENE						
AMINO SILANE						
METHYL ETHYL KETONE						
STA.SET= 99 CAT= PA D.C. 1200 VM AND P NAPHTHA	<.1 (27)	<.1 (27)	.2 (27)	.4 (27)	.4 (27)	.0
ORGANOMETALLIC SALTS						
STA.SET= 99 CAT= SO FREON TMC	<.1 (27)	.1 (27)	.5 (27)	1.2 (27)	1.2 (27)	.0
STA.SET= 99 CAT= SO 1,1,1-TRICHLOROETHANE	<.1 (27)	.1 (27)	.5 (27)	1.2 (27)	1.2 (27)	.0
STA.SET= 99 CAT= SO MEK & CELLOSOLVE	4.1	9.0	48.8	107.6	107.6	.0
STA.SET= 99 CAT= SO HEPTANE	25.0	55.2	300.3	662.0	662.0	.0
STA.SET= 99 CAT= SO CELLSOLVE ACETATE	35.7	78.7	429.2	944.0	944.0	.0
STA.SET= 99 CAT= SO METHYL ETHYL KETONE	29.5	65.1	353.6	779.6	779.6	.0
STA.SET= 99 CAT= SR SOLVENT REDUCER	.2	.4	2.2	4.8	4.8	.0
METHYL ETHYL KETONE CYCLOHEXANONE	.1	.1	.1	.7	.7	.0
STA.SET= 99 CAT= SW SOLVENT CONTAMINATED WATER	27.0	59.5	324.0	714.4	714.4	.0
SUBTOTAL FOR SET 99	229.0	502.8	2736.6	6033.2	6033.2	.0
TOTAL FOR ALL SETS	346657.3	764252.6	4159888.0	9171032.0	9171032.0	267623.5

TABLE 9 (CONT.)
SUMMARY BY CATEGORY

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 20

CATEGORY	BASELINE MONTHLY			YEARLY			CONTINGENCY PER YEAR	
	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS
SD	2753.8	6071.2	33045.8	72654.0	0	0	0	0
EV	4504.4	9930.5	54052.3	119165.6	0	0	0	0
FO	12.7	28.0	152.4	336.0	0	0	0	0
FS	1352.5	2981.7	16229.4	35781.0	0	0	0	0
OS	410.9	905.8	4930.3	10869.6	0	0	0	0
HF	134.2	295.8	1610.2	3550.0	0	0	0	0
AN	9.6	21.2	115.2	235.0	0	0	0	0
CH	933.6	2058.1	11202.8	24698.0	0	0	0	0
CR	12.9	28.3	154.2	340.0	0	0	0	0
HS	1293.0	2850.7	15516.1	34208.0	0	0	0	0
HY	142.2	313.6	1706.9	3763.2	44470.6	99055.5	0	0
IN	393.2	866.9	4718.4	10402.4	0	0	0	0
MH	155.9	343.7	1870.6	4124.0	6464.6	14252.0	0	0
NH	12.1	26.7	145.1	320.0	47.2	100.0	0	0
HO	145.6	321.0	1747.0	3851.6	65050.2	143412.0	0	0
PA	27.4	60.3	328.4	724.0	0	0	0	0
SW	509.5	1123.2	6113.5	13476.0	0	0	0	0
WP	1.5	3.3	18.1	46.0	0	0	0	0
PS	0	0	0	0	304179.0	1111971.0	0	0
QW	189298.2	417333.3	22271578.9	5000000.0	0	0	0	0
AL	0	0	0	0	0	0	0	0
CA	16.6	36.7	199.6	440.0	0	0	0	0
PW	50.5	111.3	296.0	1336.0	0	0	0	0
BA	24.7	54.4	296.1	652.0	0	0	0	0
CB	36.3	80.0	435.4	970.0	0	0	0	0
CS	4838.3	10666.7	58059.5	129000.0	0	0	0	0
CW	0	0	0	0	0	0	0	0
IW	61763.8	136166.7	741166.0	1634000.0	0	0	0	0
PR	0	0	0	0	0	0	0	0
SB	70566.5	155573.3	846798.0	1864000.0	0	0	0	0
SI	7257.4	16000.0	87089.3	192000.0	2.2	4.0	0	0
SR	2	4	0	0	0	0	0	0

* For footnotes, see Table 8.

TABLE 10. HAZARDOUS WASTE GENERATION FOR 1986 *

PAGE 1

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 0 (2) CAT= SD CONTAMINATED FREON	1188.4 (3)	2620.0 (3)	14260.9 (3)	31440.0 (3)	.0 .0
SUBTOTAL FOR SET 0	1188.4	2620.0	14260.9	31440.0	.0 .0
STA. SET= 17 CAT= EU WASTEWATER FROM EEWAS	1362.7 (4)	3004.2 (4)	16352.1 (4)	36050.4 (4)	.0 .0
STA. SET= 17 CAT= FO DIESEL FUEL & OIL					
STA. SET= 17 CAT= FS CONTAMINATED DILUTION WATER MMH	-.6	-.0	-.0	-.0	.0 .0
STA. SET= 17 CAT= OS CONTAMINATED DILUTION WATER H2O4	-.0	-.0	-.0	-.0	.0 .0
SUBTOTAL FOR SET 17	1362.7	3004.2	16352.1	36050.4	.0 .0
STA. SET= 18 CAT= HF HYDRAULIC FLUIDS	2.2 (5)	4.8 (5)	25.9 (5)	57.0 (5)	.0 .0
SUBTOTAL FOR SET 18	2.2	4.8	25.9	57.0	.0 .0
STA. SET= 19 CAT= AW TPS ADHESIVE, RTV 566/577? PHENYL METHYL POLYSILOXANE	.6	1.3	6.8	15.0	.0 .0
TIN OXIDE IRON OXIDE SILICON HARDENER	(CONT.)				
STA. SET= 19 CAT= AW EA 911 EPOXY					.0 .0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 2

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
EPOXY			
ZINC CHROMATE			
ASBESTOS			
MERCAPTAN			
DIMETHYLAMINE			
STA. SET= 19 CAT= AW	.0	.0	.0
EA 9309 EPOXY			
EPOXY RESIN			
ASBESTOS			
STA. SET= 19 CAT= AW	.0	.0	.0
EA 9309 EPOXY			
EPOXY RESIN			
GLASS FIBERS			
ACRYLONITRILE/BUTADIEN/STYRENE			
ASBESTOS			
POLYGLYCOL DIAMINE			
SILANE			
STA. SET= 19 CAT= CN			
SPRAYCANS OF TPS SEALER			
FLUORINATED SOLVENT			
FREON 113			
STA. SET= 19 CAT= CN	3.4 ⁽⁶⁾	7.5 ⁽⁶⁾	40.8 ⁽⁶⁾
KORDON PRIMER CONTAM CANS			90.0 ⁽⁶⁾
BUTYL ACETATE			.0
METHYL ETHYL KETONE			.0
TOLUENE			
TALC - Mg SILICATES			
EPOXY RESIN			
STA. SET= 19 CAT= CN	1.4 ⁽⁷⁾	3.0 ⁽⁷⁾	16.3 ⁽⁷⁾
LACQUER SPRAY CANS			36.0 ⁽⁷⁾
PIGMENT SOLIDS			.0
VEHICLE SOLIDS			.0
TOLUENE			
XYLENE			
HYDROCARBON PROPELLANT			
PETROLEUM DISTILLATES			
STA. SET= 19 CAT= CN	.3 ⁽⁸⁾	.8 ⁽⁸⁾	4.1 ⁽⁸⁾
ISP CONTAM CUPS & WOOD STICKS			9.0 ⁽⁸⁾
INSTANT SET POLYMER			.0
STA. SET= 19 CAT= CN	.1 ⁽⁷⁾	.3 ⁽⁷⁾	1.6 ⁽⁷⁾
MARSHALL STENCIL INK SPRAYCANS			3.6 ⁽⁷⁾
XYLENE			.0
(CONT.)			.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 3

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	KILOGRAMS POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
NAPTHA OTHER MATERIALS				
STA. SET= 19 CAT= CN LACQUER SPRAYCANS PIGMENT SOLIDS VEHICLE SOLIDS T-JUENE XYLENE HYDROCARBON PROPELLANT PETROLEUM DISTILLATES	1.1 ⁽⁷⁾	2.4 ⁽⁷⁾	13.1 ⁽⁷⁾	28.8 ⁽⁷⁾
STA. SET= 19 CAT= CN ENAMEL SPRAYCANS	2.0 ⁽⁷⁾	4.5 ⁽⁷⁾	24.5 ⁽⁷⁾	54.0 ⁽⁷⁾
STA. SET= 19 CAT= CN ZINC CHROMATE PRIMER CANS	2.0 ⁽⁷⁾	4.5 ⁽⁷⁾	24.5 ⁽⁷⁾	54.0 ⁽⁷⁾
STA. SET= 19 CAT= CN CONTAMINATED TARE CUPS EA 911 EPOXY EA 9334 EPOXY EA 9309 EPOXY			.0	.0
STA. SET= 19 CAT= CR RAGS WITH SOLVENTS, GREASES	2.3 ⁽⁹⁾	5.6 ⁽⁹⁾	27.2 ⁽⁹⁾	60.0 ⁽⁹⁾
STA. SET= 19 CAT= CR SOLVENT-CONTAM CHEESECLOTH ISOPROPYL ALCOHOL METHYL ETHYL KETONE 1,1,1-TRICHLOROETHANE			.0	.0
STA. SET= 19 CAT= CR MEK & IPA CONTAM CHEESECLOTH METHYL ETHYL KETONE ISOPROPYL ALCOHOL			.0	.0
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0	.0
STA. SET= 19 CAT= CR TCE CONTAMINATED CHEESECLOTH 1,1,1-TRICHLOROETHANE			.0	.0
STA. SET= 19 CAT= CR MEK CONTAMINATED CHEESECLOTH METHYL ETHYL KETONE			.0	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 4

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	MONTHLY POUNDS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL					.0	.0
STA. SET= 19 CAT= CR SOLID FILM LUBRIC CONT CHSCLTH					.0	.0
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL					.0	.0
STA. SET= 19 CAT= CR DICHLOROMETHANE CONT CHSCLTH					.0	.0
STA. SET= 19 CAT= CR CONTAM CLOTHES, CLOTH & DEBRIS KOROPON BASE PRIMER KOROPON ACTIVATOR BERYLLIUM DUST	2.3 ⁽¹⁰⁾	5.0 ⁽¹⁰⁾	27.2 ⁽¹⁰⁾	60.0 ⁽¹⁰⁾	.0	.0
STA. SET= 19 CAT= EW WASTEWATER FROM EEW&S	1514.1 ⁽⁴⁾	3338.0 ⁽⁴⁾	18169.0 ⁽⁴⁾	40056.0 ⁽⁴⁾		
STA. SET= 19 CAT= FS WASTEWATER FROM PAYLOAD/ORB MMH	272.2	600.0	3265.8	7200.0	.0	.0
STA. SET= 19 CAT= FS WASTE FUEL AND PRIMOL 355 ⁽¹¹⁾ HYDRAZINE & MMH	18.1 ^{.9}	40.0 ^{2.0}	217.7 ^{10.9}	480.0 ^{24.0}		
STA. SET= 19 CAT= HF VACUUM PUMP OIL TEXACO REGAL OIL 068	2.3	5.0	27.2	60.0	.0	.0
STA. SET= 19 CAT= HS FUEL SCRUBBER HYDRAZINE & MMH	1270.1 ^{25.4}	2800.0 ^{56.0}	15240.6 ^{304.8}	33600.0 ^{672.0}	.0	.0
STA. SET= 19 CAT= HY HYDRAZINE	.0	.0	.0	.0	2494.7 ⁽¹²⁾	5500.0 ⁽¹²⁾
STA. SET= 19 CAT= HY HYDRAZINE	34.0	75.0	408.2	900.0	34.0 ⁽¹²⁾	75.0 ⁽¹²⁾
STA. SET= 19 CAT= IN POLYURETHANE FOAM	2.3	5.0	27.2	60.0	.0	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 5

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	MONTHLY FOUNDS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA. SET= 19 CAT= IN F U-32 A B MIX "LYNX" "E" "ORATIC" "D" PARTICLES "D" ALU DIPHENYLMETH DIISOCYANATE POLYMERS OF DPM DIISOCYANATE	.1	.2	.8	1.8	.0	.0
STA. SET= 19 CAT= IN INSTANT SET POLYMER SCRAPS DIPHENYL METHANE DIISOCYANATE POLYOXALKYLENE>POLYETHER AROMATIC HYDROCARBONS	.9 ⁽¹³⁾	2.0 ⁽¹³⁾	10.9 ⁽¹³⁾	24.0 ⁽¹³⁾	.0	.0
STA. SET= 19 CAT= IN SILANE/ACETIC ACID RESIDUE METHYL TRIMETHOXY-SILANE ACETIC ACID	.2	.5	2.7	6.0	.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	17.7	39.0	212.3	468.0	.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	4.5	10.0	54.4	120.0	.0	.0
STA. SET= 19 CAT= MH ⁽¹⁴⁾ MONOMETHYL HYDRAZINE	9.4 ⁽¹⁵⁾	20.7 ⁽¹⁵⁾	112.7 ⁽¹⁵⁾	248.4 ⁽¹⁵⁾	107.3 ⁽¹²⁾	236.5 ⁽¹²⁾
STA. SET= 19 CAT= MH ⁽¹⁴⁾ MONOMETHYL HYDRAZINE	9.4 ⁽¹⁵⁾	20.7 ⁽¹⁵⁾	112.7 ⁽¹⁵⁾	248.4 ⁽¹⁵⁾	148.3 ⁽¹²⁾	327.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	6.7 ⁽¹⁵⁾	14.7 ⁽¹⁵⁾	80.0 ⁽¹⁵⁾	176.4 ⁽¹⁵⁾	182.8 ⁽¹²⁾	403.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	20.8 ⁽¹⁵⁾	45.9 ⁽¹⁵⁾	249.8 ⁽¹⁵⁾	550.9 ⁽¹⁵⁾	.0	.0
STA. SET= 19 CAT= NH WASTEWATER WITH AMMONIA	18.1 ⁽¹⁵⁾	40.0 ⁽¹⁵⁾	217.7 ⁽¹⁵⁾	480.0 ⁽¹⁵⁾	.0	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	2.7	6.0	32.7	72.0	.0	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	4.9	10.8	58.8	29.6	.0	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	17.1 ⁽¹⁵⁾	37.6 ⁽¹⁵⁾	205.7 ⁽¹⁵⁾	453.6 ⁽¹⁵⁾	163.1 ⁽¹²⁾	359.5 ⁽¹²⁾

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 6

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEAPLY KILOGRAMS	KILOGRAMS POUNDS	CONTINGENCY PER YEAR KILOGRAMS	KILOGRAMS POUNDS
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	17.1 ⁽¹⁵⁾	37.8 ⁽¹⁵⁾	205.7 ⁽¹⁵⁾	452.6 ⁽¹⁵⁾	232.9 ⁽¹²⁾
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	11.9 ⁽¹⁵⁾	26.3 ⁽¹⁵⁾	143.2 ⁽¹⁵⁾	315.6 ⁽¹⁵⁾	286.2 ⁽¹²⁾
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	39.7 ⁽¹⁵⁾	87.6 ⁽¹⁵⁾	476.8 ⁽¹⁵⁾	1051.2 ⁽¹⁵⁾	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	.0
STA. SET= 19 CAT= OS DECONTAMINATE FROM PAYLOAD/ORB H204	145.1	320.0	1741.8	3840.0	.0
STA. SET= 19 CAT= OS SOLVENT EXPIIDER AND PRIMCL 355 ⁽¹⁵⁾ H204	18.6	41.0	223.2	492.0	.0
STA. SET= 19 CAT= PA KOREPA PRIMER COP1 SK1 BRUSH BUTYL ACETATE FOLC : Mg Si : Ca ⁽¹⁵⁾ POXY RESIN	1.4	3.0	16.3	36.0	.0
STA. SET= 19 CAT= PA LACQUER #62648C	9. ⁽¹⁶⁾	20.0 ⁽¹⁶⁾	108.9 ⁽¹⁶⁾	240.0 ⁽¹⁶⁾	.6
STA. SET= 19 CAT= PA CONTAMINATED BRUSHES ORGANIC ZINC PRIMER ZINC CHROMATE PRIMER	.3 ⁽¹⁷⁾	.6 ⁽¹⁷⁾	3.5 ⁽¹⁷⁾	7.8 ⁽¹⁷⁾	.0
STA. SET= 19 CAT= PA ORGANIC ZINC PRIMER ZINC DUST BARYTES MOLYDATE ORANGE SILICA HIGH MOLECULAR WEIGHT EPOXY CELLOSOLVE ACETATE TOLUENE METHYL ETHYL KETONE	.9 ⁽¹⁶⁾	2.0 ⁽¹⁶⁾	10.9 ⁽¹⁶⁾	24.0 ⁽¹⁶⁾	.0
STA. SET= 19 CAT= PA CONTAMINATED PAINT BRUSHES EA 911 EPOXY (CONT.)	.9 ⁽¹⁶⁾	2.0 ⁽¹⁶⁾	10.9 ⁽¹⁶⁾	24.0 ⁽¹⁶⁾	.0

TABLE 110 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 7

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
EA 934 EPOXY EA 9309 EPOXY						
STA.SET= 19 CAT= SO DOPE & LACQUER THINNER ALIPHATIC NAPHTHA	.4 .1	.9 .2	4.9 .8	10.8 1.6	0	0
ESTER OR KETONE ISO- OR n-BUTYL ACETATE	.2	.4	2.2 1.4	4.8 3.0		
ISO- OR n-BUTYL ALCOHOL	.1 <.1	.3 .1	.5 .5	1.2		
STA.SET= 19 CAT= SU WASHWATER WITH MEK METHYL ETHYL KETONE	21.2 3.1	46.8 6.8	254.5 36.7	561.0 61.0	0	0
SUBTOTAL FOR SET 19	3509.3	7736.7	42111.5	92840.4	7731.7	17045.5
89						
STA.SET= 21 CAT= EN WASTEWATER FROM EEWAS	1362.7 (4)	3004.2 (4)	16352.1 (4)	36050.4 (4)		
STA.SET= 21 CAT= FS WASTEWATER WITH MMH MMH	54.0 5.0	119.0 11.0	647.7 59.9	1428.0 132.0	0	0
STA.SET= 21 CAT= HS FUEL SCRUBBER MMH	1811.4 3.3	400.0 7.3	2177.2 39.7	4800.0 87.6	0	0
STA.SET= 21 CAT= IN TILE REPAIR FOAM POLYURETHANE	2.3 2.3	5.0 5.0	27.2 27.2	60.0 60.0	0	0
STA.SET= 21 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	.0		
STA.SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	9797.5 (19)	21600.0 (19)
STA.SET= 21 CAT= NO NITROGEN TETOXIDE	7.5	16.5	89.8	198.0	0	0
STA.SET= 21 CAT= NO NITROGEN TETOXIDE	25.6	56.3	307.5	678.0	0	0
STA.SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	4898.8 (20)	10800.0 (20)
STA.SET= 21 CAT= OS WASTEWATER WITH OXIDIZER (CONT.)	36.4	80.2	436.5	962.4	0	0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 8

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	BASELINE POUNDS	KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
N204	.3	.6	3.3	3.3	7.2		
STA. SET= 21 CAT= SW WASTEWATER WITH MEK METHYL ETHYL KETONE	21.2 3.0	46.7 6.7	254.2 36.5	560.4 80.4	.0 .0	.0	.0
STA. SET= 21 CAT= UP WASTE SEALS, FILTERS, ETC.	2.3 (21)	5.0 (21)	27.2 (21)	60.0 (21)	.0	.0	.0
SUBTOTAL FOR SET 21	1693.3	3733.1	20319.6	44797.2	14696.3	32400.0	
STA. SET= 23 CAT= EW WASTEWATER FROM EEW&S	1514.1	3338.0	18169.0	40056.0			
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. WASTEWATER HYDRAZINE	283.9 14.1	626.0 31.0	3407.4 168.7	7512.0 372.0			
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. CLNUP WATER HYDRAZINE	94.6 1.0	208.5 2.3	1134.9 12.5	2502.0 27.6			
STA. SET= 23 CAT= FS WASTEWATER FROM PPR HYDRAZINE	1135.6	2503.5	13626.8	30042.0			
STA. SET= 23 CAT= FS PRIMOL 355(11), MMH HYDRAZINE MMH	170.3	375.5	2043.9	4506.0			
STA. SET= 23 CAT= HF HYDRAULIC FLUIDS TETRAORTHORESOL PHOSPHATE	196.9	434.0 434.0	2362.3 2362.3	5208.0 5208.0	.0	.0	
STA. SET= 23 CAT= HS HYDRAZINE & MMH SCRUBBER HYDRAZINE MMH	378.5 (18) 8.4 6.6	834.5 (18) 18.5 14.5	4542.3 (18) 100.7 78.9	10014.0 (18) 222.0 174.0	.0	.0	
STA. SET= 23 CAT= HY HYDRAZINE	104.1	229.5	1249.2	2754.0	.0	.0	.0
STA. SET= 23 CAT= HY LBM PROPELLANT PARAHYDRAZINE (CONT.)	.0	.0	.0	.0	39689.1 (22)	87500.0 (22)	

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 9

WASTE MATERIAL	KILOGRAMS	BASELINE MONTHLY POUNDS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
UHSYM DIMETHYLHYDRAZINE	.0	.0	.0	.0	.0	.0
STA. SET= 23 CAT= HY HYDRAZINE	.0	.0	.0	.0	2712.7 (22)	5980.5 (22)
STA. SET= 23 CAT= IH K5NA INSULATION BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED	5.2	11.5	62.6	138.0	.0	.0
STA. SET= 23 CAT= MN MONOMETHYL HYDRAZINE	165.3	364.5	1984.0	4374.0	.0	.0
STA. SET= 23 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	.0	6026.2 (22)	13285.5 (22)
STA. SET= 23 CAT= NH AMMONIA	.0	.0	.0	.0	47.2 (22)	104.0 (22)
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	91.7	292.1	1100.3	2425.8	.0	.0
STA. SET= 23 CAT= NO LBM OXIDIZER NITROGEN TETROXIDE	.0	.0	.0	.0	39689.1 (22)	87500.0 (22)
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	.0	.0	.0	.0	14064.9 (22)	31008.0 (22)
STA. SET= 23 CAT= OS N2O4 COLD IAM, CLEANUP WATER NITROGEN TETROXIDE	56.7	125.0	680.4	1500.0	.0	.0
STA. SET= 23 CAT= OS N2O4 CONTAM. WASTEWATER NITROGEN TETROXIDE	189.1	417.0	2269.8	5004.0	14.1	372.0
STA. SET= 23 CAT= OS PRIMOL 355(11), H2O4	170.3	375.5	2043.9	4506.0	.0	.0
STA. SET= 23 CAT= PS SRB PROPELLANT SPILL AMMONIUM PERCHLORATE ALUMINUM POWDER PBAN BINDER HTPB BINDER IRON OXIDE	.0	.0	.0	.0	504301.3 (24)	1111800.0 (24)
STA. SET= 23 CAT= QU	283947.3	626000.0	3407368.0	7512000.0	.0	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 10

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
ALUMINUM OXIDE	1.7	3.7	20.1	44.4	
AMMONIA	.1	.3	1.4	3.0	
HYDROCHLORIC ACID	181.2	399.5	2174.5	4794.0	
ORGANIC CARBON	1.7	3.8	20.4	45.0	
STA. SET= 23 CAT= SO SOLVENT MIXTURE FREON TMC/MF/TF SYM. TETRACHLOROETHANE	145.7 ⁽²⁵⁾	321.3 ⁽²⁵⁾	1748.9 ⁽²⁵⁾	3855.6 ⁽²⁵⁾	.0
STA. SET= 23 CAT= SO CONTAMINATED SOLVENTS	132.4 ⁽²⁶⁾	292.0 ⁽²⁶⁾	1589.4 ⁽²⁶⁾	3504.0 ⁽²⁶⁾	.0
STA. SET= 23 CAT= SW SOLVENT WASTEWATER UNSPEC.	208.2 ⁽¹⁸⁾⁽²⁵⁾	459.0 ⁽¹⁸⁾⁽²⁵⁾	2498.4 ⁽¹⁸⁾⁽²⁵⁾	5508.0 ⁽¹⁸⁾⁽²⁵⁾	.0
STA. SET= 23 CAT= SW CONTAMINATED WASTEWATER SOLVENTS	473.1 ⁽¹⁸⁾	1043.0 ⁽¹⁸⁾	5677.1 ⁽¹⁸⁾	12516.0 ⁽¹⁸⁾	.0
CHLORINATED RUBBER					
ZINC PRIMER					
SUBTOTAL FOR SET 23	289463.2	638160.5	3473558.5	7657926.0	102229.2
					225378.0
STA. SET= 31 CAT= AL SURFACTANT					.0
NaOH					
SODIUM TRIPOLYPHOSPHATE					
STA. SET= 31 CAT= AW EA 934 EPOXY ADHESIVE	7.9 ⁽²⁶⁾⁽²⁷⁾	17.5 ⁽²⁶⁾⁽²⁷⁾	95.3 ⁽²⁶⁾⁽²⁷⁾	210.0 ⁽²⁶⁾⁽²⁷⁾	.0
EPOXY RESIN	3.4	7.5	40.8	90.0	
ASBESTOS	.9	2.0	10.9	24.0	
FILLERS	1.6	3.5	19.1	42.0	
POLYAMIDE	1.8	4.0	21.8	48.0	
DIETHYLENTRIARINE	.2	.5	2.7	6.0	
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	11.3	25.0	136.1	300.0	.0
STA. SET= 31 CAT= CA CHARCOAL FILTER WASTES					.0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	11.3	25.0	136.1	300.0	.0
STA. SET= 31 CAT= CN BOSTIK PRIMER PAINT CANS	3.4 ⁽⁶⁾	7.5 ⁽⁶⁾	40.8 ⁽⁶⁾	90.0 ⁽⁶⁾	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 11

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 31 CAT= CN BOSTIK TOPCOAT PAINT CANS	10.2 ⁽⁶⁾	22.5 ⁽⁶⁾	122.5 ⁽⁶⁾	270.0 ⁽⁶⁾	.0
STA. SET= 31 CAT= CN RUSTOLEUM PRIMER PAINT CANS	.5 ⁽⁶⁾	1.0 ⁽⁶⁾	5.4 ⁽⁶⁾	12.0 ⁽⁶⁾	.0
STA. SET= 31 CAT= CN RUSTOLEUM TOPCOAT PAINT CANS	.5 ⁽⁶⁾	1.0 ⁽⁶⁾	5.4 ⁽⁶⁾	12.0 ⁽⁶⁾	.0
STA. SET= 31 CAT= CN MSA-1 EMPTY CONTAINERS	226.8 ⁽²⁸⁾	500.0 ⁽²⁸⁾	2721.5 ⁽²⁸⁾	6000.0 ⁽²⁸⁾	.0
STA. SET= 31 CAT= CN K5HA CONTAINERS	1.7	3.8	20.4	45.0	.0
STA. SET= 31 CAT= CN K5HA & KTA-2 PACKING MATERIALS	1134.0 ⁽²⁸⁾	2500.0 ⁽²⁸⁾	13607.7 ⁽²⁸⁾	30000.0 ⁽²⁸⁾	.0
STA. SET= 31 CAT= CR SOLVENT CONTAMINATED RAGS	2.3 ⁽⁹⁾	5.0 ⁽⁹⁾	27.2 ⁽⁹⁾	60.0 ⁽⁹⁾	.0
STA. SET= 31 CAT= CR ALODINE CONTAMINATED RAGS	1.1 ⁽⁹⁾	2.5 ⁽⁹⁾	13.6 ⁽⁹⁾	30.0 ⁽⁹⁾	.0
STA. SET= 31 CAT= CR RYPML CLOTHS	2.3 ⁽⁹⁾	5.0 ⁽⁹⁾	27.2 ⁽⁹⁾	60.0 ⁽⁹⁾	.0
STA. SET= 31 CAT= CR PAINT DROP CLOTHS	3.4 ⁽⁹⁾	7.5 ⁽⁹⁾	40.8 ⁽⁹⁾	90.0 ⁽⁹⁾	.0
STA. SET= 31 CAT= EW WASTEWATER FROM EEV&S	605.6 ⁽⁴⁾	1335.2 ⁽⁴⁾	7267.6 ⁽⁴⁾	16022.4 ⁽⁴⁾	
STA. SET= 31 CAT= FO FUEL AND OIL SPILLS	.0	.0	.0	.0	
STA. SET= 31 CAT= FO FUEL & OIL WASTES	19.1	42.0	228.6	504.0	.0
STA. SET= 31 CAT= FS PRIMOL 355 ⁽¹¹⁾	.0	.0	.0	.0	
STA. SET= 31 CAT= HS SCRUBBER EFFLUENT	18.8 ⁽¹⁸⁾	41.5 ⁽¹⁸⁾	225.9 ⁽¹⁸⁾	498.0 ⁽¹⁸⁾	.0
STA. SET= 31 CAT= HY HYDRAZINE	54.7	120.7	656.7	1447.8	.0
STA. SET= 31 CAT= IN MSA-1 (CURED) ⁽²⁹⁾	45.4 ⁽²⁵⁾	100.0 ⁽²⁵⁾	544.3 ⁽²⁵⁾	1200.0 ⁽²⁵⁾	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 12

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE MONTHLY POUNDS	YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
EPICHLORHYDRIN/BGE GLASS ECOSPHERES PHENOLIC MICROSPHERES GLASS FIBERS BENTONE 27 METHYLENE DIANILINE N-PHENYLENE DIAMINE	18.2 5.4 16.1 2.0 1.5 1.6 .7	40.1 11.8 35.4 4.4 3.3 3.5 1.5	218.0 64.2 193.0 23.9 18.2 19.1 7.9	480.6 141.6 425.4 52.8 40.2 42.0 17.4	.0	.0
STA SET= 31 CAT= IN MSA-1, PART A (CUMMIXED) (30) METHYLENE CHLORIDE EPICHLORHYDRIN/BGE					.0	.0
STA SET= 31 CAT= IN MSA-1, PART B (CUMMIXED) (30) METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIAMINE N-PHENYLENE DIAMINE ETHYL ALCOHOL PHENOLIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27					.0	.0
STA SET= 31 CAT= IN MTA-2 (CURED) (29) EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES	22.7 7.0 7.0 2.8 .3 5.6	50.0 15.5 15.5 6.2 .6 12.4	272.2 34.1 84.1 33.5 3.3 67.2	600.0 185.4 185.4 73.8 7.2 148.2	.0	.0
STA SET= 31 CAT= IN MTA-2 (CUMMIXED) (30) EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES METHYLENE CHLORIDE PERCHLOROETHYLENE	6.8 2.1 2.1 .8 .1 1.7	15.0 4.6 4.6 1.9 .2 3.7	81.6 25.3 25.3 10.1 1.1 20.1	180.0 55.8 55.8 22.2 2.4 44.4	.0	.0
STA SET= 31 CAT= IN K5NA BUTYL GLYCIDYL ETHER EPOXY RESINS	3.6	8.0	43.5	96.0	.0	.0
STA SET= 31 CAT= IN INSULATION AND PAPER					.0	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1985

PAGE 13

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY POUNDS	KILOGRAMS	POUNDS
STA. SET= 31 CAT= PA BOSTIK EPOXY PRIMER EPOXY RESIN AMINE CURING AGENT TITANIUM DIOXIDE CHROMATE PIGMENTS INERT PIGMENTS SUSPENSION & FLOW CONTROL ADDI SOLVENTS	6.1 .8 .1 .1 .3 .9 <.1 3.7	13.5 1.8 .3 .3 .6 1.9 .1 8.1	73.5 9.5 1.6 1.6 3.3 10.3 .3 44.1	162.0 21.0 3.6 3.6 7.2 22.8 .6 97.2	.0 .0 .0 24.5 3.8 20.4 1.4 9.5 40.8	.0 54.0 8.4 45.0 3.0 21.0 90.0
STA. SET= 31 CAT= PA BOSTIK EPOXY TOPCOAT EPICHLORHYDRIN/BISPHENOL A AMINE CURING AGENT COLOR PIGMENT SUSPENSION & FLOW CONTROL ADDI SOLVENTS PHOTOCHEM REACTIVE SOLVENTS NONPHOTOCHEM REACTIVE	8.4 2.0 .3 1.7 .1 .6 3.4	18.5 4.5 .7 3.8 .3 1.8 7.5	100.7 24.5 3.8 20.4 1.4 9.5 40.8	222.0 54.0 8.4 45.0 3.0 21.0 90.0	.0 .0 .0 .0 .0 .0 .0	.0 54.0 8.4 45.0 3.0 21.0 90.0
95 STA. SET= 31 CAT= PA RUSTOLEUM PRIMER SILICATES YELLOW IRON OXIDE TITANIUM DIOXIDE CALCIUM BOROSILICATE BENTONITE LINED PHENOLIC ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS AND ADDITIVES	1.8 .3 .1 <.1 .3 <.1 .4 .6 <.1	4.0 .6 .3 .1 .8 <.1 .8 1.3 .1	21.8 3.5 1.6 .5 4.1 .1 4.4 7.1 .5	48.0 7.8 3.6 1.2 9.0 .2 9.6 15.6 1.2	.0 .0 .0 .0 .0 .0 .0 .0	.0 7.8 3.6 1.2 9.0 .2 9.6 15.6 1.2
STA. SET= 31 CAT= PA RUSTOLEUM TOPCOAT SILICATES TITANIUM DIOXIDE BENTONITE CLAY TINTING COLORS ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS & ADDITIVES	1.8 .6 .3 <.1 <.1 .3 .5 <.1	4.0 1.3 .7 <.1 .1 .7 1.2 .1	21.8 7.1 3.8 .1 .5 3.8 6.5 .3	48.0 15.6 8.4 .2 1.2 8.4 14.4 .6	.0 .0 .0 .0 .0 .0 .0 .0	.0 15.6 8.4 .2 1.2 8.4 14.4 .6
STA. SET= 31 CAT= PA GACOFLEX TITANIUM DIOXIDE CLAY HYPALOH HYDROCARBON RESIN PERCHLOROETHYLENE 1,1,1-TRICHLOROETHANE (CONT.)	8.8 .6 .7 .9 .2 .4 2.2	19.5 1.4 1.5 2.0 .4 9.1 4.9	106.1 7.3 8.4 10.6 2.2 49.8 26.7	234.0 16.2 18.6 25.4 4.8 105.8 58.8	.0 .0 .0 .0 .0 .0 .0	.0 16.2 18.6 25.4 4.8 105.8 58.8

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 14

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
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EPICLIXIDIZED SOYBEAN OIL	.1	.2	1.1
STA. SET= 31 CAT= PA PAINT-SPILL ABSORBANT	.0	.0	.6
STA. SET= 31 CAT= PW ALODINE CONTAMINATED WASTEWATER	75.7 (18) 1.3 (31)	167.0 (18) 3.0 (31)	909.0 (18) 16.1 (31) 2004.0 (18) 35.4 (31)
CHROMIC ACID	.7	1.7	9.0 19.8
FERRICYANIDE SALT	<.1	.1	.3 .6
COMPLEX FLUORIDE SALT			
STA. SET= 31 CAT= S0 PERCHLOROETHYLENE	.3	.7	3.8 8.4
STA. SET= 31 CAT= S0 TRICHLOROETHANE	.2	.5	3.0 6.6
STA. SET= 31 CAT= S0 FREON 113	.3	.6	3.5 7.8
STA. SET= 31 CAT= S0 MSA-1 CONTAMINATED MECI	752.7	1659.5	9032.8 19914.0
STA. SET= 31 CAT= S0 MSA-1 CONTAM PERCHLOROETHYLENE	926.0	2041.5	11112.0 24498.0
STA. SET= 31 CAT= S0 PERCHLOROETHYLENE	138.8	306.0	1665.6 3672.0
STA. SET= 31 CAT= S0 TRICHLOROETHANE	40.8	90.0	489.9 1080.0
STA. SET= 31 CAT= S0 METHYLENE CHLORIDE	127.9	282.0	1534.9 3384.0
STA. SET= 31 CAT= S0 MJA-2 CONTAMINATED SOLVENTS	264.9 (26)	584.0 (26)	3178.8 (26) 7008.0 (26)
STA. SET= 31 CAT= S0 BOSTIK CONTAMINATED SOLVENTS	132.4 (26)	292.0 (26)	1589.4 (26) 3504.0 (26)
STA. SET= 31 CAT= S0 RUSTOLEUM CONTAMINATED SOLVENT	132.4 (26)	292.0 (26)	1589.4 (26) 3504.0 (26)
SUBTOTAL FOR SET 31	4813.0	10611.0	57756.5 127332.0
STA. SET= 32 CAT= BA LITHIUM STORAGE BATTERIES	12.2	27.0	147.0 324.0

.0 .0
.0 .0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 15

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY POUNDS
STA. SET= 32 CAT= BA SILVER-ZINC STORAGE BATTERIES	20.4	45.0	244.9	540.0	.0
STA. SET= 32 CAT= BA POTASSIUM HYDROXIDE SOLUTION	4.4 ⁽¹⁸⁾	9.6 ⁽¹⁸⁾	52.3 ⁽¹⁸⁾	115.2 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= CB HYDRAZINE-CONTAMINATED WATER	54.4 ⁽¹⁸⁾	120.0 ⁽¹⁸⁾	653.2 ⁽¹⁸⁾	1440.0 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= CS ⁽³²⁾ CONTAMINATED SEAWATER	.0	.0	.0	.0	.0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER ⁽³²⁾	7257.4	16000.0	87099.3	1920000.0	.0
STA. SET= 32 CAT= CW SRB FWD SKT CLEANING WASTES				.0	.0
STA. SET= 32 CAT= EW WASTEWATER FROM EENUTS	302.8 ⁽⁴⁾	667.6 ⁽⁴⁾	3633.8 ⁽⁴⁾	8011.2 ⁽⁴⁾	
STA. SET= 32 CAT= FO BILGE WASTES				.0	.0
STA. SET= 32 CAT= FO DIESEL FUEL & OIL SPILLS	.0	.0	.0	.0	.0
STA. SET= 32 CAT= FS WASTE FUEL & PRIMOL 35 ⁽¹¹⁾ HYDRAZINE	.0	.0	.0	.0	.0
STA. SET= 32 CAT= HS HYDRAZINE SCRUBBER EFFLUENT HYDRAZINE	90.7 ⁽¹⁸⁾ .8	200.0 ⁽¹⁸⁾ 1.8	1088.6 ⁽¹⁸⁾ 9.8	2400.0 ⁽¹⁸⁾ 21.6	.0
STA. SET= 32 CAT= HY HYDRAZINE	20.5	45.3	246.3	543.0	.0
STA. SET= 32 CAT= IN INSULATION WASTES, SOLID ⁽³³⁾ MSA-1 INSULATION MTA-2 INSULATION K5HA INSULATION PR-955 INSULATION	362.9 ⁽³⁴⁾	800.0 ⁽³⁴⁾	4354.5 ⁽³⁴⁾	9600.0 ⁽³⁴⁾	.0
STA. SET= 32 CAT= IN INSULATION CONTAM FILTERS	2.3 ⁽²¹⁾	5.0 ⁽²¹⁾	27.2 ⁽²¹⁾	60.0 ⁽²¹⁾	.0
STA. SET= 32 CAT= IV INSULATION-CONTAMINATED WATER ⁽³³⁾	92645.8 ⁽¹⁸⁾	204250.0 ⁽¹⁸⁾	1111749.0 ⁽¹⁸⁾	2451000.0 ⁽¹⁸⁾	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 16

WASTE MATERIAL	BASELINE KILOGRAMS	MONTHLY POUNDS	YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
MSA-1 INSULATION HTA-2 INSULATION K5HA INSULATION PR-655 INSULATION					.0	.0
STA. SET= 32 CAT= PR PRESERVATIVE CHEMICALS PROTECTIVE LUBRICANTS					.0	.0
STA. SET= 32 CAT= PS SRB SOLID PROPELLANT AMMONIUM PERCHLORATE ALUMINUM POWDER FERRIC OXIDE POLYMER & EPOXY RESIN	.0 .0 .0 .0 .0	.0 .0 .0 .0 .0	.0 .0 .0 .0 .0	.0 .0 .0 .0 .0	78.5 ⁽²⁴⁾	173.0 ⁽²⁴⁾
STA. SET= 32 CAT= SB DETERGENT WASHWATER ⁽³⁵⁾	17417.9	38400.0	209014.3	460800.0	.0	.0
STA. SET= 32 CAT= SB POTABLE RINSE WATER	60236.8	132800.0	722841.0	1593600.0	.0	.0
STA. SET= 32 CAT= SB DEIONIZED RINSE WATER	28195.2	62160.0	338341.8	745920.0	.0	.0
STA. SET= 32 CAT= SI SRB RINSE WATER	10886.2	24000.0	130633.9	288000.0	.0	.0
STA. SET= 32 CAT= SO SOLVENTS FREON TMC/TM SOLVENTS, UNSPECIFIED	5.3 ⁽²⁶⁾	11.7 ⁽²⁶⁾	63.7 ⁽²⁶⁾	140.4 ⁽²⁶⁾	.0	.0
SUBTOTAL FOR SET 32	217515.1	479541.2	2610181.0	5754494.0	.0	.0
STA. SET= 33 CAT= CA AIR FILTERS	2.3 ⁽²¹⁾	5.0 ⁽²¹⁾	27.2 ⁽²¹⁾	60.0 ⁽²¹⁾	.0	.0
STA. SET= 33 CAT= EW WASTEWATER FROM EEW&S	94.6	208.5	1134.9	2502.0	.0	.0
STA. SET= 33 CAT= HF HYDRAULIC FLUIDS					.0	.0
SUBTOTAL FOR SET 33	96.8	213.5	1162.1	2562.0	.0	.0

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 17

WASTE MATERIAL	BASELINE KILOGRAMS	MONTHLY POUNDS	BASELINE KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA.SET= 99 CAT= AW GX-6300 ABLATOR ADHESIVE RESIN STM L 663 RESIN STM L 664 SILICA POWDER CARBON POWDER CURING AGENT L 663 CURING AGENT L 664 HEPTANE XYLENE	.2.9 .3 1.1 .1 .1 .1 <.1 1.2 .1	6.5 .6 2.4 .2 .2 .3 .1 2.6 .2	35.4 3.5 13.1 1.1 1.1 1.4 .3 14.2 .8	78.0 7.6 28.6 2.4 2.4 3.0 .6 31.2 1.8	.0 .0 .0 .0 .0 .0 .0 .0	.0
STA.SET= 99 CAT= AW ISOCELL POLYESTER RESIN ADHESIVE STYRENE MEK PEROXIDE CATALYST DIMETHYL PHthalate	2.9	6.5	35.4	78.0	.0	.0
STA.SET= 99 CAT= CA FILTER					.0	.0
STA.SET= 99 CAT= CH SOLVENT CONTAMINATED CONTAINER SOLVENTS(36)	1.1 ⁽²⁸⁾	2.5 ⁽²⁸⁾	13.6 ⁽²⁸⁾	30.0 ⁽²⁸⁾	.0	.0
STA.SET= 99 CAT= CN PRIMER CONTAMINATED CONTAINERS	.2 ⁽²⁸⁾	.4 ⁽²⁸⁾	1.9 ⁽²⁸⁾	4.2 ⁽²⁸⁾	.0	.0
STA.SET= 99 CAT= CN ADHESIVE CONTAMINATED CONTAINER	.2 ⁽²⁸⁾	.4 ⁽²⁸⁾	1.9 ⁽²⁸⁾	4.2 ⁽²⁸⁾	.0	.0
STA.SET= 99 CAT= CN SOLVENT CONTAINERS					.0	.0
STA.SET= 99 CAT= CH POUR FOAM CONTAINERS	11.3 ⁽²⁸⁾	25.0 ⁽²⁸⁾	136.1 ⁽²⁸⁾	300.9 ⁽²⁸⁾	.0	.0
STA.SET= 99 CAT= CN ABLATOR CONTAMINATED CONTAINER	.2 ⁽²⁸⁾	.4 ⁽²⁸⁾	1.9 ⁽²⁸⁾	4.2 ⁽²⁸⁾	.0	.0
STA.SET= 99 CAT= CR SOLVENT CONTAMINATED RAGS	2.3 ⁽⁹⁾	5.0 ⁽⁹⁾	27.2 ⁽⁹⁾	60.0 ⁽⁹⁾	.0	.0
STA.SET= 99 CAT= CR ADHESIVE CONTAMINATED RAGS	2.3 ⁽⁹⁾	5.0 ⁽⁹⁾	27.2 ⁽⁹⁾	60.0 ⁽⁹⁾	.0	.0
STA.SET= 99 CAT= CR EPOXY PRIMER-CONTAMINATED RAGS	1.1 ⁽⁹⁾	2.5 ⁽⁹⁾	13.6 ⁽⁹⁾	30.0 ⁽⁹⁾	.0	.0
STA.SET= 99 CAT= IN BX-250 FOAM (SOFI)	59.0	130.0	707.6	1560.0	.0	.0

(CONT.)

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 18

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
	POUNDS	POUNDS	POUNDS
DIPHENYL METHANE DIISOCYANATE	14.7	32.5	176.9
FREON 11	9.5	21.0	114.3
AMINES	5.2	11.5	62.6
POLYOOLS			
SUPER MEK PEROXIDE			
POLYESTER RESIN			
DIMETHYL FTHALATE			
STA. SET= 99 CAT= IN POUR FOAM "MIXED" (29)	62.4 ⁽³⁷⁾	137.5 ⁽³⁷⁾	748.4 ⁽³⁷⁾
POLYURETHANE			
STA. SET= 99 CAT= IN POUR FOAM PART A (UNMIXED) (30)	3.2	7.0	38.1
DIPHENYL METHANE DIISOCYANATE	1.6	3.5	19.1
FREON 11	1.0	2.3	12.2
POLYOOLS, AMINES	.6	1.3	6.8
STA. SET= 99 CAT= IN POUR FOAM PART B (UNMIXED) (30)	3.2	7.0	38.1
FREON 11	.6	1.4	7.6
AMINE CATALYST	.1	.2	.8
POLYETHER POLYOL BLEND	2.5	5.4	29.7
STA. SET= 99 CAT= IN POUR FOAM CONTAMINATED PAPER	.7 ⁽²⁸⁾	1.7 ⁽²⁸⁾	9.0 ⁽²⁸⁾
			19.8 ⁽²⁸⁾
STA. SET= 99 CAT= IN SUPER LIGHT ABALATOR (11)	2.3	5.0	27.2
RESIN STM L664, PT A	1.3	3.0	16.1
SILICA FIBERS	.1	.3	1.6
CORK	.3	.6	3.3
PHENOLIC MICROSPHERES	.1	.2	.8
SILICA MICROSPHERES	.3	.7	3.8
CURING AGENT	.1	.3	1.6
STA. SET= 99 CAT= IN SUPER LIGHT ABALATOR (11)	2.3	5.0	27.2
RESIN STM L664, PT A	.7	1.5	8.2
CARBON POWDER			
SILICA FIBERS			
CORK			
SILICA MICROSPHERES			
PHENOLIC MICROSPHERES			
CURING AGENT STM L664, PT B	.4	.9	4.6
STA. SET= 99 CAT= IN POUR FOAM "TRIMMINGS"	2.3	5.0	27.2
POLYURETHANE			

TABLE 10 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 19

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA.SET= 99 CAT= PA EPOXY PRIMER METHYLENE ISOBUTYL KETONE XYLENE CYCLOHEXANONE CHROMATES INORGANIC PIGMENTS H-BUTANOL TOLUENE AMINO SILANE METHYL ETHYL KETONE	<.1 ⁽²⁷⁾	.1 ⁽²⁷⁾	.3 ⁽²⁷⁾	.6 ⁽²⁷⁾	.0
STA.SET= 99 CAT= PA D.C. 1200 VM AND P NAPHTHA ORGANOMETALLIC SALTS	<.1 ⁽²⁷⁾	.1 ⁽²⁷⁾	.3 ⁽²⁷⁾	.6 ⁽²⁷⁾	.0
STA.SET= 99 CAT= SO FREON TMC	.1 ⁽²⁷⁾	.2 ⁽²⁷⁾	.8 ⁽²⁷⁾	1.8 ⁽²⁷⁾	.0
STA.SET= 99 CAT= SO 1,1,1-TRICHLOROETHANE	.1 ⁽²⁷⁾	.2 ⁽²⁷⁾	.8 ⁽²⁷⁾	1.8 ⁽²⁷⁾	.0
STA.SET= 99 CAT= SO NEK & CELLOSOLVE	6.1	13.5	73.2	161.4	.0
STA.SET= 99 CAT= SO HEPTANE	37.5	82.8	450.4	993.6	.0
STA.SET= 99 CAT= SO CELLOSOLVE ACETATE	53.5	118.0	642.3	1416.0	.0
STA.SET= 99 CAT= SO METHYL ETHYL KETONE	44.2	97.4	530.4	1169.4	.0
STA.SET= 99 CAT= SR SOLVENT REDUCER METHYL ETHYL KETONE CYCLOHEXANONE	.3 .2 .1	.6 .4 .2	3.3 2.2 1.1	7.2 4.8 2.4	.0
STA.SET= 99 CAT= SV SOLVENT CONTAMINATED WATER	40.5	89.3	486.1	1071.6	.0
SUBTOTAL FOR SET 99	342.1	754.2	4104.9	9049.8	.0
TOTAL FOR ALL SETS	519986.1	1146379.3	6233833.0	13756550.0	124657.2
					274823.5

TABLE 10 (CONT.)
SUMMARY BY CATEGORY

HAZARDOUS WASTE GENERATION FOR 1986

PAGE 20

CATEGORY	BASELINE MONTHLY			BASELINE YEARLY			CONTINGENCY PER YEAR		
	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS
SO	4130.7	9106.8	49568.8	109281.0	0	0	0	0	0
EW	6756.5	14895.7	81078.5	178748.4	0	0	0	0	0
FO	19.1	42.0	228.6	504.0	0	0	0	0	0
FS	2028.7	4472.5	24344.2	5367.0	0	0	0	0	0
OS	616.3	1358.7	7395.5	16304.4	0	0	0	0	0
HF	201.3	443.8	2415.4	5325.0	0	0	0	0	0
AW	14.4	31.8	172.8	381.0	0	0	0	0	0
CN	1400.3	3087.3	16804.2	37047.0	0	0	0	0	0
CR	19.3	42.5	231.3	510.0	0	0	0	0	0
HS	1939.6	4276.0	23274.6	51312.0	0	0	0	0	0
HY	213.4	470.4	2560.4	5644.8	44930.6	99055.5	0	0	0
IN	589.8	1300.3	7077.6	15603.6	0	0	0	0	0
MH	233.8	515.5	2805.9	6186.0	6464.6	14252.0	0	0	0
NH	18.1	40.0	217.7	480.0	47.2	104.0	0	0	0
NO	218.4	481.5	2620.6	5777.4	65050.2	143412.0	0	0	0
PA	41.0	90.5	492.6	1086.0	0	0	0	0	0
SW	764.2	1694.8	9170.2	20217.0	0	0	0	0	0
UP	2.3	5.0	27.2	60.0	0	0	0	0	0
PS	0	0	0	0	504379.8	1111973.0	0	0	0
QW	283947.3	6226000.0	3407368.0	7512000.0	0	0	0	0	0
AL	0	0	0	0	0	0	0	0	0
CA	24.9	55.0	299.4	660.0	0	0	0	0	0
PW	75.7	167.0	909.0	2004.0	0	0	0	0	0
BA	37.0	81.6	444.2	979.2	0	0	0	0	0
CB	54.4	120.0	653.2	1440.0	0	0	0	0	0
CS	7257.4	16000.0	87089.3	192000.0	0	0	0	0	0
CY	0	0	0	0	0	0	0	0	0
IW	92645.8	204250.0	1111749.0	245100.0	0	0	0	0	0
PR	0	0	0	0	0	0	0	0	0
SB	105849.8	233360.0	1270197.0	2800320.0	0	0	0	0	0
S1	10886.2	24000.0	130633.9	288000.0	0	0	0	0	0
SR	.3	.6	3.3	7.2	.0	.0	.0	.0	.0

* For footnotes, see Table 8.

TABLE 11. HAZARDOUS WASTE GENERATION FOR 1987 *

PAGE 1

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA. SET= 0 ⁽²⁾ CAT= SO CONTAMINATED FREON	1980.7 ⁽³⁾	4366.7 ⁽³⁾	23768. ⁽³⁾	52400.0 ⁽³⁾	.0 .0
SUBTOTAL FOR SET 0	1980.7	4366.7	23768.1	52400.0	.0 .0
STA. SET= 17 CAT= EU WASTEWATER FROM EEEVs	2271. ⁽⁴⁾	5007.0 ⁽⁴⁾	27253.5 ⁽⁴⁾	60084.0 ⁽⁴⁾	.0 .0
STA. SET= 17 CAT= FO DIESEL FUEL					
STA. SET= 17 CAT= FS CONTAMINATED DILUTION WATER MMH					
STA. SET= 17 CAT= OS CONTAMINATED DILUTION WATER H2O4					
SUBTOTAL FOR SET 17	2271.1	5007.0	27253.5	60084.0	.0 .0
STA. SET= 18 CAT= HF HYDRAULIC FLUIDS	3.6 ⁽⁵⁾	7.9 ⁽⁵⁾	43.1 ⁽⁵⁾	95.0 ⁽⁵⁾	.0 .0
SUBTOTAL FOR SET 18	3.6	7.9	43.1	95.0	.0 .0
STA. SET= 19 CAT= AW TPS ADHESIVE, RTV 566/577 PHENYL METHYL POLYSILOXANE TIN OXIDE IRON OXIDE SILICON HARDENER	.9	2.1	11.3	25.0	.0 .0
STA. SET= 19 CAT= AW EA 911 EPOXY (CONT.)					

TABLE 11 <CONT. >

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 2

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY POUNDS	KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
EPOXY					
ZINC CHROMATE					
ASBESTOS					
MERCAPTAN					
DIMETHYLAMINE					
STA. SET= 19 CAT= AW					
EA 9309 EPOXY	.0	.0	.0	.0	.0
EPOXY RESIN					
GLASS FIBERS					
ACRYLONITRILE/BUTADIEN/STYRENE					
ASBESTOS					
POLYGLYCOL DIAMINE					
SILANE					
STA. SET= 19 CAT= CN					
SPRAYCANS OF TPS SEALER					
FLUORINATED SOLVENT					
FREON 113					
STA. SET= 19 CAT= CN					
KOROPON PRIMER CONTAM CANS	5.7(6)	12.5(6)	68.0(6)	150.0(6)	.0
BUTYL ACETATE					
METHYL ETHYL KETONE					
TOLUENE					
TALC - Mg SILICATES					
EPOXY RESIN					
STA. SET= 19 CAT= CN					
LACQUER SPRAY CANS	2.3(7)	5.0(7)	27.2(7)	60.0(7)	.0
PIGMENT SOLIDS					
VEHICLE SOLIDS					
TOLUENE					
XYLENE					
HYDROCARBON PROPELLANT					
PETROLEUM DISTILLATES					
STA. SET= 19 CAT= CN					
ISP CONTAM CUPS & WOOD STICKS	.6(8)	1.3(8)	6.8(8)	15.0(8)	.0
INSTANT SET POLYMER					
STA. SET= 19 CAT= CN					
MARSHALL STENCIL INK SPRAYCANS	.2(7)	.5(7)	2.7(7)	6.0(7)	.0
XYLENE (CONT.)					

TABLE II (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 3

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
NAPTHA OTHER MATERIALS			
STA. SET= 19 CAT= CN LACQUER SPRAYCANS	1.8 ⁽⁷⁾	4.0 ⁽⁷⁾	21.8 ⁽⁷⁾
PIGMENT SOLIDS			48.0 ⁽⁷⁾
VEHICLE SOLIDS			.0
TOLUENE			.0
XYLENE			.0
HYDROCARBON PROPELLANT			.0
PETROLEUM DISTILLATES			.0
STA. SET= 19 CAT= CN ENAMEL SPRAYCANS	3.4 ⁽⁷⁾	7.5 ⁽⁷⁾	40.8 ⁽⁷⁾
STA. SET= 19 CAT= CN ZINC CHROMATE PRIMER CANS	3.4 ⁽⁷⁾	7.5 ⁽⁷⁾	40.8 ⁽⁷⁾
STA. SET= 19 CAT= CW CONTAMINATED TARE CUPS			90.0 ⁽⁷⁾
EA 911 EPOXY			.0
EA 934 EPOXY			.0
EA 9309 EPOXY			.0
STA. SET= 19 CAT= CR RAGS WITH SOLVENTS, GREASES	3.8 ⁽⁹⁾	8.3 ⁽⁹⁾	45.4 ⁽⁹⁾
STA. SET= 19 CAT= CR SOLVENT-CONTAM CHEESECLOTH			100.0 ⁽⁹⁾
ISOPROPYL ALCOHOL			.0
METHYL ETHYL KETONE			.0
1,1,1-TRICHLOROETHANE			.0
STA. SET= 19 CAT= CR MEK & IPA CONTAM CHEESECLOTH			.0
METHYL ETHYL KETONE			.0
ISOPROPYL ALCOHOL			.0
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH			.0
ISOPROPYL ALCOHOL			.0
STA. SET= 19 CAT= CR TCE CONTAMINATED CHEESECLOTH			.0
1,1,1-TRICHLOROETHANE			.0
STA. SET= 19 CAT= CR MEK CONTAMINATED CHEESECLOTH			.0
METHYL ETHYL KETONE			.0

TABLE 11 <CONT. >

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 4

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0		.0		
STA. SET= 19 CAT= CR SOLID FILM LUBRIC CONT CHSCLTH			.0		.0		
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0		.0		
STA. SET= 19 CAT= CR DICHLOROMETHANE CONT CHSCLTH			.0		.0		
STA. SET= 19 CAT= CR CONTAM CLOTHES, CLOTH & DEBRIS KOROPON BASE PRIMER KOROPON ACTIVATOR BERYLLIUM DUST	3.8 (10)	8.3 (10)	45.4 (10)	100.0 (10)	.0	.0	
STA. SET= 19 CAT= EW WASTEWATER FROM EEW'S	2523.5 ⁽⁴⁾	5563.3 ⁽⁴⁾	30281.7 ⁽⁴⁾	66760.0 ⁽⁴⁾			
STA. SET= 19 CAT= FS WASTEWATER FROM PAYLOAD/ORB MMH	453.6 45.4	1000.0 100.0	5443.1 544.3	12000.0 1200.0	.0	.0	
STA. SET= 19 CAT= FS WASTE FUEL AND PRIMOL 355 ⁽¹¹⁾ HYDRAZINE & MMH	30.2 1.5	66.7 3.3	362.9 18.1	800.0 40.0			
STA. SET= 19 CAT= HF VACUUM PUMP OIL 068	3.8	8.3	45.4	100.0	.0	.0	
STA. SET= 19 CAT= HS FUEL SCRUBBER HYDRAZINE & MMH	2116.8 42.3	4666.7 93.3	25401.0 508.0	56000.0 1120.0	.0	.0	
STA. SET= 19 CAT= HY HYDRAZINE	.0	.0	.0	.0	2494.7 ⁽¹²⁾	5500.0 ⁽¹²⁾	
STA. SET= 19 CAT= HY HYDRAZINE	56.7	125.0	680.4	1500.0	34.0 ⁽¹²⁾	75.0 ⁽¹²⁾	
STA. SET= 19 CAT= IH POLYURETHANE FOAM	3.8	8.3	45.4	100.0	.0	.0	

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 5

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 19 CAT= IN ALUMACAST A/B MIXTURE POLYOPROFENE PENTAERYTHRITOL AROMATIC WHITE OIL INERT ALUMINIZED PARTICLES DIPHENYL METHANE DIISOCYANATE POLYMERS OF DPM DIISOCYANATE	.1	.3	1.4	3.0	.0
STA. SET= 19 CAT= IN INSTANT SET POLYMER SCRAPS DIPHENYL METHANE DIISOCYANATE POLYOXYALKYLENE)POLYETHER AROMATIC HYDROCARBONS	1.5 ⁽¹³⁾	3.3 ⁽¹³⁾	18. ⁽¹³⁾	40.0 ⁽¹³⁾	.0
STA. SET= 19 CAT= IN SILANE/ACETIC ACID RESIDUE METHYL TRIMETHOXYSILANE ACETIC ACID	.4	.8	4.5	10.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	29.5	65.0	353.8	780.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	7.6	16.7	90.7	200.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	15.6 ⁽¹⁵⁾	34.5 ⁽¹⁵⁾	187.8 ⁽¹⁵⁾	414.0 ⁽¹⁵⁾	107.3 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	15.6 ⁽¹⁵⁾	34.5 ⁽¹⁵⁾	187.8 ⁽¹⁵⁾	414.0 ⁽¹⁵⁾	148.3 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	11.1 ⁽¹⁵⁾	24.5 ⁽¹⁵⁾	133.4 ⁽¹⁵⁾	294.0 ⁽¹⁵⁾	182.8 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	34.7 ⁽¹⁵⁾	76.5 ⁽¹⁵⁾	416.4 ⁽¹⁵⁾	918.0 ⁽¹⁵⁾	.0
STA. SET= 19 CAT= MH WASTEWATER WITH AMMONIA	30.2 ⁽¹⁵⁾	66.7 ⁽¹⁵⁾	362.9 ⁽¹⁵⁾	800.0 ⁽¹⁵⁾	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	4.5	10.0	54.4	120.0	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	6.2	18.0	98.0	216.0	.0
STA. SET= 19 CAT= NO NITROGEN TETOXIDE	28.6 ⁽¹⁵⁾	63.0 ⁽¹⁵⁾	342.9 ⁽¹⁵⁾	756.0 ⁽¹⁵⁾	163. ⁽¹²⁾
					359.5 ⁽¹²⁾

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 6

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA,SET= 19 CAT= NO NITROGEN TETOXIDE	28.6 ⁽¹⁵⁾	63.0 ⁽¹⁵⁾	342.9 ⁽¹⁵⁾	756.0 ⁽¹⁵⁾
STA,SET= 19 CAT= NO NITROGEN TETOXIDE	19.9 ⁽¹⁵⁾	43.8 ⁽¹⁵⁾	238.6 ⁽¹⁵⁾	526.0 ⁽¹⁵⁾
STA,SET= 19 CAT= NO NITROGEN TETOXIDE	66.2 ⁽¹⁵⁾	146.0 ⁽¹⁵⁾	794.7 ⁽¹⁵⁾	1752.0 ⁽¹⁵⁾
STA,SET= 19 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0
STA,SET= 19 CAT= OS DECORTAMINATE FROM PAYLOAD/ORB N204	241.9	533.3	2903.0	6400.0
	2.3	5.0	27.2	60.0
STA,SET= 19 CAT= OS WASTE OXIDIZER AND PRIMOL 355 ⁽¹¹⁾ N204	31.0	68.3	371.9	820.0
	2.3	5.0	27.2	60.0
STA,SET= 19 CAT= PA KOROPON PRIMER CONT PNT BRUSHES BUTYL ACETATE TALC - Mg SILICATES EPOXY RESIN	15. ⁽¹⁶⁾	33.3 ⁽¹⁶⁾	181.4 ⁽¹⁶⁾	400.0 ⁽¹⁶⁾
STA,SET= 19 CAT= PA LACQUER #6264B6	.5 ⁽¹⁷⁾	1.1 ⁽¹⁷⁾	5.9 ⁽¹⁷⁾	13.0 ⁽¹⁷⁾
STA,SET= 19 CAT= PA CONTAMINATED BRUSHES ORGANIC ZINC PRIMER ZINC CHROMATE PRIMER	1.5 ⁽¹⁶⁾	3.3 ⁽¹⁶⁾	18. ⁽¹⁶⁾	40.0 ⁽¹⁶⁾
STA,SET= 19 CAT= PA ORGANIC ZINC PRIMER ZINC DUST BARYTES MOLYBDATE ORANGE SILICA HIGH MOLECULAR WEIGHT EPOXY CELLOSOLVE ACETATE TOLUENE METHYL ETHYL KETONE	4.7 ⁽¹⁸⁾	10.4 ⁽¹⁸⁾	56.7 ⁽¹⁸⁾	125.0 ⁽¹⁸⁾
STA,SET= 19 CAT= PA CONTAMINATED PAINT BRUSHES EA 911 EPOXY (CONT.)	1.5 ⁽¹⁶⁾	3.3 ⁽¹⁶⁾	18. ⁽¹⁶⁾	40.0 ⁽¹⁶⁾

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 7

WASTE MATERIAL	KILOGRAMS	BASELINE MONTHLY POUNDS	KILOGRAMS	BASELINE YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
EA 934 EPOXY EA 9309 EPOXY					
STA. SET= 19 CAT= SO DOPe & LACQUER THINNER ALIPHATIC NAPHTHA ESTER OR KETONE ISO- OR n-BUTYL ACETATE ISO- OR n-BUTYL ALCOHOL	.7 .1 .3 .2 .1	1.5 .3 .7 .4 .2	8.2 1.4 3.6 2.3 .9	18.0 .0 8.0 5.0 2.0	.0 .0 .0 .0 .0
STA. SET= 19 CAT= SU WASHWATER WITH MEK METHYL ETHYL KETONE	35.3 5.1	77.9 11.3	424.1 61.2	935.0 135.0	.0 .0
SUBTOTAL FOR SET 19	5848.8	12894.5	70185.8	154734.0	7731.7 17045.5
109					
STA. SET= 21 CAT= EW WASTEWATER FROM EEWHS	2271.1 ⁽⁴⁾	5007.0 ⁽⁴⁾	27253.5 ⁽⁴⁾	60084.0 ⁽⁴⁾	
STA. SET= 21 CAT= FS WASTEWATER WITH MMH MMH	90.0 8.3	198.3 18.3	1079.5 99.8	2380.0 220.0	.0 .0
STA. SET= 21 CAT= HS FUEL SCRUBBER MMH	302.4 5.5	666.7 12.2	3628.7 66.2	8000.0 146.0	.0 .0
STA. SET= 21 CAT= IH TILE REPAIR FOAM POLYURETHANE	3.8 3.8	8.3 8.3	45.4 45.4	100.0 100.0	.0 .0
STA. SET= 21 CAT= MH MONOETHYL HYDRAZINE	.0	.0	.0	.0	.0
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	16329.2 ⁽¹⁹⁾
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	12.5	27.5	149.7	330.0	.0
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	42.7	94.2	512.6	1130.0	.0
STA. SET= 21 CAT= OS WASTEWATER WITH OXIDIZER (CONT.)	60.6	133.7	727.6	1604.0	.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 8

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	POUNDS	KILOGRAMS	KILOGRAMS	CONTINGENCY PER YEAR POUNDS
N204	.5	1.0	5.4	12.0			
STA. SET= 21 CAT= SW WASTEWATER WITH MEK METHYL ETHYL KETONE	35.3	77.8	423.7	934.0	.0	134.0	.0
STA. SET= 21 CAT= WP WASTE SEALS, FILTERS, ETC.	5.1	11.2	60.8				
SUBTOTAL FOR SET 21	35.8 ⁽²¹⁾	8.3 ⁽²¹⁾	45.4 ⁽²¹⁾	100.0 ⁽²¹⁾	.0	.0	
	2822.2	6221.8	33865.9	74662.0	21228.0	46800.0	
STA. SET= 23 CAT= EW WASTEWATER FROM EEDS	2523.5	5563.3	30281.7	66760.0			
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. WASTEWATER HYDRAZINE	473.2	1043.3	5678.9	12520.0	23.4	51.7	620.0
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. CLHUP WATER HYDRAZINE	157.6	347.5	1891.5	4170.0	1.7	3.8	46.0
STA. SET= 23 CAT= FS WASTEWATER FROM PPR HYDRAZINE	1892.6	4172.5	22711.3	50070.0			
STA. SET= 23, CAT= FS PRIMOL 355 ⁽¹¹⁾ , MMH HYDRAZINE MMH	283.9	625.8	3406.5	7510.0			
STA. SET= 23 CAT= HF HYDRAULIC FLUIDS TETRAORTHORESOL PHOSPHATE	328.1	723.3	3937.2	8680.0	328.1	723.3	.0
STA. SET= 23 CAT= HS HYDRAZINE & MMH SCRUBBER HYDRAZINE MMH	630.9 ⁽¹⁸⁾	1390.8 ⁽¹⁸⁾	7570.4 ⁽¹⁸⁾	16690.0 ⁽¹⁸⁾	14.0	30.8	167.8
STA. SET= 23 CAT= HY HYDRAZINE	11.0	24.2	131.5	290.0			
	173.5	382.5	2082.0	4590.0	.0	.0	
STA. SET= 23 CAT= HY LBN PROPELLANT PARAHYDRAZINE (CONT.)	.0	.0	.0	.0	39689.1 ⁽²²⁾	87500.0 ⁽²²⁾	

TABLE 11 <CONT. >

HAZARDOUS WASTE GENERATION FOR 1987

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WASTE MATERIAL	KILOGRAMS	BASELINE MONTHLY POUNDS	KILOGRAMS	BASELINE YEARLY POUNDS	KILOGRAMS	CONTINGENCY PER YEAR POUNDS
UNSYM DIMETHYLHYDRAZINE	.0	.0	.0	.0	.0	.0
STA,SET= 23 CAT= HY HYDRAZINE	.0	.0	.0	.0	.0	2712.7 (22)
STA,SET= 23 CAT= IN K5HA INSULATION BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED	8.7	19.2	104.3	230.0	.0	.0
STA,SET= 23 CAT= MH MONOMETHYL HYDRAZINE	275.6	607.5	3306.7	7290.0	.0	.0
STA,SET= 23 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	.0	.0	6026.2 (22) 13285.5 (22)
STA,SET= 23 CAT= NH AMMONIA	.0	.0	.0	.0	.0	47.2 (22) 104.0 (22)
STA,SET= 23 CAT= NO NITROGEN TETROXIDE	152.8	336.9	1833.9	4043.0	.0	.0
STA,SET= 23 CAT= NO LBN OXIDIZER NITROGEN TETROXIDE	.0	.0	.0	.0	.0	39689.1 (22) 87500.0 (22)
STA,SET= 23 CAT= NO NITROGEN TETROXIDE	.0	.0	.0	.0	.0	14064.9 (22) 31008.0 (22)
STA,SET= 23 CAT= OS H204 CONTAM. CLEANUP WATER NITROGEN TETROXIDE	.9	208.3	1134.0	2500.0	.0	.0
STA,SET= 23 CAT= OS H204 CONTAM. WASTEWATER NITROGEN TETROXIDE	23.4	51.7	281.2	620.0	.0	.0
STA,SET= 23(11) CAT= OS PRIMOL N204	283.9	625.8	3406.5	7510.0	.0	.0
STA,SET= 23 CAT= PS SRB PROPELLANT SPILL	.0	.0	.0	.0	.0	504301.3 (24) 1111800.0 (24)
AMMONIUM PERCHLORATE	.0	.0	.0	.0	.0	.0
ALUMINUM POWDER	.0	.0	.0	.0	.0	.0
PBAH BINDER	.0	.0	.0	.0	.0	.0
HTPB BINDER	.0	.0	.0	.0	.0	.0
IRON OXIDE	.0	.0	.0	.0	.0	.0
STA,SET= 23 CAT= QU DELUGE WATER (CONT.)	473245.6	1043333.4	5678946.0	12520000.0	.0	.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

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WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
ALUMINUM OXIDE	2.8	6.2	33.6	74.0
AMMONIA	.2	.4	2.3	5.0
HYDROCHLORIC ACID	302.0	665.8	3624.2	7990.0
ORGANIC CARBON	2.8	6.3	34.0	75.0
STA. SET= 23 CAT= SO SOLVENT MIXTURE FREON TMC/MF/TF SYM. TETRACHLOROETHANE	242.9 ⁽²⁵⁾	535.5 ⁽²⁵⁾	2914.8 ⁽²⁵⁾	6426.0 ⁽²⁵⁾
STA. SET= 23 CAT= SO CONTAMINATED SOLVENTS	220.7 ⁽²⁶⁾	486.7 ⁽²⁶⁾	2649.0 ⁽²⁶⁾	5840.0 ⁽²⁶⁾
STA. SET= 23 CAT= SW SOLVENT WASTEWATER UNSPEC.	347.0 ⁽¹⁸⁾⁽²⁵⁾	765.0 ⁽¹⁸⁾⁽²⁵⁾	4164.0 ⁽¹⁸⁾⁽²⁵⁾	9180.0 ⁽¹⁸⁾⁽²⁵⁾
STA. SET= 23 CAT= SW CONTAMINATED WASTEWATER SOLVENTS CHLORINATED RUBBER ZINC PRIMER	789.5 ⁽¹⁸⁾	1738.3 ⁽¹⁸⁾	9461.9 ⁽¹⁸⁾	20360.0 ⁽¹⁸⁾
SUBTOTAL FOR SET 23	482438.6	1063600.8	5789264.0	12763210.0
STA. SET= 31 CAT= AL SURFACTANT NaOH				.0
SODIUM TRIPOLYPHOSPHATE				.0
STA. SET= 31 CAT= AW EA 934 EPOXY ADHESIVE	13.2 ⁽²⁶⁾⁽²⁷⁾	29.2 ⁽²⁶⁾⁽²⁷⁾	158.8 ⁽²⁶⁾⁽²⁷⁾	350.0 ⁽²⁶⁾⁽²⁷⁾
EPoxy RESIN	5.7	12.5	68.0	150.0
ASBESTOS	1.5	3.3	18.1	40.0
FILLERS	2.6	5.8	31.8	70.0
POLYAMIDE	3.0	6.7	36.3	80.0
DIETHYLENETRIAMINE	.4	.8	4.5	10.0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	18.9	41.7	226.8	500.0
STA. SET= 31 CAT= CA CHARCOAL FILTER WASTES				.0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	18.9	41.7	226.8	500.0
STA. SET= 31 CAT= CN BOSTIK PRIMER PAINT CANS	5.7 ⁽⁶⁾	12.5 ⁽⁶⁾	68.0 ⁽⁶⁾	150.0 ⁽⁶⁾

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 11

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	MONTHLY POUNDS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA.SET= 31 CAT= CN BOSTIK TOPCOAT PAINT CANS	17.9 ⁽⁶⁾	37.5 ⁽⁶⁾	204. ⁽⁶⁾	450. ⁽⁶⁾	.0	.0
STA.SET= 31 CAT= CN RUSTOLEUM PRIMER PAINT CANS	.8 ⁽⁶⁾	1.7 ⁽⁶⁾	9. ⁽⁶⁾	20. ⁽⁶⁾	.0	.0
STA.SET= 31 CAT= CN RUSTOLEUM TOPCOAT PAINT CANS	.8 ⁽⁶⁾	1.7 ⁽⁶⁾	9. ⁽⁶⁾	20. ⁽⁶⁾	.0	.0
STA.SET= 31 CAT= CN MSA-1 EMPTY CONTAINERS	378. ⁽²⁸⁾	833. ⁽²⁸⁾	4535. ⁽²⁸⁾	10000. ⁽²⁸⁾	.0	.0
STA.SET= 31 CAT= CN K5HA CONTAINERS	2.8	6.3	34.0	75.0	.0	.0
STA.SET= 31 CAT= CN K5HA & MTA-2 PACKING MATERIALS	1890. ⁽²⁸⁾	4166. ⁽²⁸⁾	22679. ⁽²⁸⁾	50000. ⁽²⁸⁾	.0	.0
STA.SET= 31 CAT= CR SOLVENT CONTAMINATED RAGS	3.8 ⁽⁹⁾	8.3 ⁽⁹⁾	45. ⁽⁹⁾	100. ⁽⁹⁾	.0	.0
STA.SET= 31 CAT= CR ALODINE CONTAMINATED RAGS	1.9 ⁽⁹⁾	4.2 ⁽⁹⁾	22.7 ⁽⁹⁾	50. ⁽⁹⁾	.0	.0
STA.SET= 31 CAT= CR RYMPLE CLOTHS	3.8 ⁽⁹⁾	8.3 ⁽⁹⁾	45. ⁽⁹⁾	100. ⁽⁹⁾	.0	.0
STA.SET= 31 CAT= CR PAINT DROP CLOTHS	5.7 ⁽⁹⁾	12.5 ⁽⁹⁾	68. ⁽⁹⁾	150. ⁽⁹⁾	.0	.0
STA.SET= 31 CAT= EW WASTEWATER FROM EEW&S	1009. ⁽⁴⁾	2225. ⁽⁴⁾	12112. ⁽⁴⁾	26704. ⁽⁴⁾		
STA.SET= 31 CAT= FO FUEL AND OIL SPILLS	.0	.0	.0	.0	.0	.0
STA.SET= 31 CAT= FO FUEL & OIL WASTES	31.8	70.0	381.0	840.0	.0	.0
STA.SET= 31 CAT= FS PRIMOL 355 ⁽¹¹⁾	.0	.0	.0	.0		
STA.SET= 31 CAT= HS SCRUBBER EFFLUENT	31.4 ⁽¹⁸⁾	69.2 ⁽¹⁸⁾	376. ⁽¹⁸⁾	830. ⁽¹⁸⁾	.0	.0
STA.SET= 31 CAT= HY HYDRAZINE	91.2	201.1	1094.5	2413.6	.0	.0
STA.SET= 31 CAT= IN MSA-1 (CURED) ⁽²⁹⁾	75.6 ⁽²⁵⁾	166.7 ⁽²⁵⁾	907.2 ⁽²⁵⁾	2000.0 ⁽²⁵⁾	.0	.0

TABLE 11 <CONT. >

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 12

WASTE MATERIAL

BASELINE MONTHLY POUNDS KILOGRAMS

YEARLY POUNDS KILOGRAMS

CONTINGENCY PER YEAR KILOGRAMS POUNDS

EPICHLORHYDRIN/BGE GLASS ECOSPHERES PHENOLIC MICROSPHERES GLASS FIBERS BENTONE 27 METHYLENE DIANILINE m-PHENYLENE DIAMINE	30.3 8.9 26.8 3.3 2.5 2.6 1.1	66.8 19.7 59.1 7.3 5.6 5.8 2.4	363.3 107.0 321.6 39.9 30.4 31.8 13.2	801.0 236.0 709.0 68.0 67.0 70.0 29.0
STA. SET= 31 CAT= IN MSA-1, PART A (UNMIXED) ⁽³⁰⁾ METHYLENE CHLORIDE EPICHLORHYDRIN/BGE			.0	.0
STA. SET= 31 CAT= IN MSA-1, PART B (UNMIXED) ⁽³⁰⁾ METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIANILINE m-PHENYLENE DIAMINE ETHYL ALCOHOL PHENOLIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27			.0	.0
STA. SET= 31 CAT= IN MTA-2 (CURED) ⁽²⁹⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES	37.8 11.7 11.7 4.6 .5 9.3	83.3 25.8 25.8 16.3 1.0 20.6	453.6 140.2 140.2 55.8 5.4 112.0	1000.0 309.0 309.0 123.0 12.0 247.0
STA. SET= 31 CAT= IN MTA-2 (UNMIXED) ⁽³⁰⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES METHYLENE CHLORIDE PERCHLOROETHYLENE	11.3 3.5 3.5 1.4 .2 2.8	25.0 7.8 7.8 3.1 .3 6.2	136.1 42.2 42.2 16.8 1.8 33.6	300.0 93.0 93.0 37.0 4.0 74.0
STA. SET= 31 CAT= IN K5NA BUTYL GLYCIDYL ETHER EPOXY RESINS	6.0	13.3	72.6	160.0
STA. SET= 31 CRT= IN INSULATION AND PAPER				.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 13

WASTE MATERIAL	KILOGRAMS	MONTHLY POUNDS	BASELINE KILOGRAMS	YEARLY POUNDS	CONTINGENCY KILOGRAMS	PER YEAR POUNDS
STA. SET= 31 CAT= PA BOSTIK EPOXY PRIMER EPOXY RESIN AMINE CURING AGENT TITANIUM DIOXIDE CHROMATE PIGMENTS INERT PIGMENTS SUSPENSION & FLOW CONTROL ADDI SOLVENTS	10.2 1.3 .2 .5 1.4 <.1 6.1	22.5 2.9 .5 .5 3.2 <.1 13.5	122.5 15.9 2.7 2.7 5.4 17.2 <.5 73.5	270.0 35.0 6.0 6.0 12.0 38.0 1.0 162.0	.0 35.0 6.0 6.0 12.0 38.0 1.0 162.0	.0 35.0 6.0 6.0 12.0 38.0 1.0 162.0
STA. SET= 31 CAT= PA BOSTIK EPOXY TOPCOAT EPICHLORHYDRIN/BISPHENOL A AMINE CURING AGENT COLOR PIGMENT SUSPENSION & FLOW CONTROL ADDI SOLVENTS PHOTOCHEM REACTIVE SOLVENTS NONPHOTOCHEM REACTIVE	14.0 3.4 .5 2.8 .2 1.3 5.7	30.8 7.5 1.2 6.3 .4 2.9 12.5	167.8 40.8 6.4 34.0 2.3 15.9 68.0	370.0 90.0 14.0 75.0 5.0 35.0 150.0	.0 90.0 14.0 75.0 5.0 35.0 150.0	.0 90.0 14.0 75.0 5.0 35.0 150.0
STA. SET= 31 CAT= PA RUSTOLEUM PRIMER SILICATES YELLOW IRON OXIDE TITANIUM DIOXIDE CALCIUM BOROSILICATE BENTONITE LINSEED PHENOLIC ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS AND ADDITIVES	3.0 .5 .2 .1 .6 <.1 -.6 1.0 .1	6.7 1.1 .5 .2 1.3 <.1 1.3 2.2 .2	36.3 5.9 2.7 .9 6.8 .2 7.3 11.8 .9	80.0 13.0 6.0 2.0 15.0 .4 16.0 26.0 2.0	.0 13.0 6.0 2.0 15.0 .4 16.0 26.0 2.0	.0 13.0 6.0 2.0 15.0 .4 16.0 26.0 2.0
STA. SET= 31 CAT= PA RUSTOLEUM TOPCOAT SILICATES TITANIUM DIOXIDE BENTONITE CLAY TINTING COLORS ALKYL RESIN ALIPHATIC HYDROCARBONS DRIERS & ADDITIVES	3.0 1.0 .5 <.1 .1 .5 .9 <.1	6.7 2.2 1.2 <.1 .2 1.2 2.0 .1	36.3 11.8 6.4 .2 .9 6.4 10.9 .5	80.0 26.0 14.0 .4 2.0 14.0 24.0 1.0	.0 26.0 14.0 .4 2.0 14.0 24.0 1.0	.0 26.0 14.0 .4 2.0 14.0 24.0 1.0
STA. SET= 31 CAT= PA GACOFLEX TITANIUM DIOXIDE CLAY HYPALON HYDROCARBON RESIN PERCHLOROETHYLENE 1,1,1-TRICHLOROETHANE (CONT.)	14.7 1.0 1.2 1.5 .3 6.9 3.7	32.5 2.3 2.6 3.3 .7 15.3 9.2	176.9 12.2 14.1 39.0 3.6 83.0 44.5	390.0 27.0 31.0 39.0 8.0 183.0 98.0	.0 27.0 31.0 39.0 8.0 183.0 98.0	.0 27.0 31.0 39.0 8.0 183.0 98.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 14

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
EPOXIDIZED SOYBEAN OIL	.2	.3	1.8	4.0		
STA. SET= 31 CAT= PA PAINT-SPILL ABSORBANT	.0	.0	.0	.0		
STA. SET= 31 CAT= PW ALODINE CONTAMINATED WASTEWATER	126.2 ⁽¹⁸⁾ (31)	278.3 ⁽¹⁸⁾ (31)	1515.0 ⁽¹⁸⁾ (31)	3340.0 ⁽¹⁸⁾ (31)	.0	.0
CHROMIC ACID	2.2	4.9 ⁽³¹⁾	26.8 ⁽³¹⁾	59.0 ⁽³¹⁾		
FERRICYANIDE SALT	1.2	2.8	15.0	33.0		
COMPLEX FLUORIDE SALT	<.1	.1	.5	1.0		
STA. SET= 31 CAT= SO PERCHLOROETHYLENE	.5	1.2	6.4	14.0	.0	.0
STA. SET= 31 CAT= SO TRICHLOROETHANE	.4	.9	5.0	11.0	.0	.0
STA. SET= 31 CAT= SO FREON 113	.5	1.1	5.9	13.0	.0	.0
STA. SET= 31 CAT= SO MEA-1 CONTAMINATED MEC1	1254.6	2765.8	15054.7	33190.0	.0	.0
STA. SET= 31 CAT= SO MEA-1 CONTAM PERCHLOROETHYLENE	1543.3	3402.5	18520.1	40830.0	.0	.0
STA. SET= 31 CAT= SO PERCHLOROETHYLENE	231.3	510.0	2776.0	6120.0	.0	.0
STA. SET= 31 CAT= SO TRICHLOROETHANE	68.0	150.0	816.5	1800.0	.0	.0
STA. SET= 31 CAT= SO METHYLENE CHLORIDE	213.2	470.0	2558.2	5640.0	.0	.0
STA. SET= 31 CAT= SO MTA-2 CONTAMINATED SOLVENTS	441.5 ⁽²⁶⁾	973.3 ⁽²⁶⁾	52297.9 ⁽²⁶⁾	11680.0 ⁽²⁶⁾	.0	.0
STA. SET= 31 CAT= SO BOSTIK CONTAMINATED SOLVENTS	220.7 ⁽²⁶⁾	486.7 ⁽²⁶⁾	2649.0 ⁽²⁶⁾	5840.0 ⁽²⁶⁾	.0	.0
STA. SET= 31 CAT= SO RUSTOLEUM CONTAMINATED SOLVENT	220.7 ⁽²⁶⁾	486.7 ⁽²⁶⁾	2649.0 ⁽²⁶⁾	5840.0 ⁽²⁶⁾	.0	.0
SUBTOTAL FOR SET 31	8021.7	17685.0	96260.9	212220.0	.0	.0
STA. SET= 32 CAT= BA LITHIUM STORAGE BATTERIES	20.4	45.0	244.9	540.0	.0	.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

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WASTE MATERIAL		BASELINE MONTHLY KILOGRAMS	YEARLY POUNDS	KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
STA. SET= 32 CAT= BA SILVER-ZINC STORAGE BATTERIES	34.0	73.0	408.2	900.0	.0
STA. SET= 32 CAT= BA POTASSIUM HYDROXIDE SOLUTION	7.3 ⁽¹⁸⁾	16.0 ⁽¹⁸⁾	87.1 ⁽¹⁸⁾	192.0 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= CB HYDRAZINE-CONTAMINATED WATER	90.7 ⁽¹⁸⁾	200.0 ⁽¹⁸⁾	1088.6 ⁽¹⁸⁾	2400.0 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER ⁽³²⁾	.0	.0	.0	.0	.0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER ⁽³²⁾	12095.7	26665.7	145148.8	320000.0	.0
STA. SET= 32 CAT= CW SRB FWD SKT CLEANING WASTES				.0	.0
STA. SET= 32 CAT= EW WASTEWATER FROM EELS	504.7 ⁽⁴⁾	1112.7 ⁽⁴⁾	6056.3 ⁽⁴⁾	13352.0 ⁽⁴⁾	.0
STA. SET= 32 CAT= FO BILGE WASTES				.0	.0
STA. SET= 32 CAT= FO DIESEL FUEL & OIL SPILLS	.0	.0	.0	.0	.0
STA. SET= 32 CAT= FS WASTE FUEL & PRIMOL 355 ⁽¹¹⁾ HYDRAZINE	.0	.0	.0	.0	.0
STA. SET= 32 CAT= HS HYDRAZINE SCRUBBER EFFLUENT HYDRAZINE	151.2 ⁽¹⁸⁾ 1.4	333.7 ⁽¹⁸⁾ 3.0	1814.4 ⁽¹⁸⁾ 16.3	4000.0 ⁽¹⁸⁾ 36.0	.0
STA. SET= 32 CAT= HY HYDRAZINE	34.2	75.4	410.5	905.0	.0
STA. SET= 32 CAT= IN INSULATION WASTES, SOLID ⁽³³⁾ MSA-1 INSULATION MTA-2 INSULATION K5HA INSULATION PR-855 INSULATION	604.8 ⁽³⁴⁾	1333.3 ⁽³⁴⁾	7257.4 ⁽³⁴⁾	16000.0 ⁽³⁴⁾	.0
STA. SET= 32 CAT= IN INSULATION CONTAM FILTERS (CONT.)	3.8 ⁽²¹⁾	8.3 ⁽²¹⁾	45.4 ⁽²¹⁾	100.0 ⁽²¹⁾	.0
STA. SET= 32 CAT= IW INSULATION-CONTAMINATED WATER ⁽³³⁾	154409.6 ⁽¹⁸⁾	340416.7 ⁽¹⁸⁾	1852915.0 ⁽¹⁸⁾	4085000.0 ⁽¹⁸⁾	.0

TABLE 11 (COHT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 16

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
MSA-1 INSULATION						
MTA-2 INSULATION						
K5NA INSULATION						
PR-855 INSULATION						
STA. SET= 32 CAT= PR PRESERVATIVE CHEMICALS PROTECTIVE LUBRICANTS						
STA. SET= 32 CAT= PS SRB SOLID PROPELLANT	.0	.0	.0	.0	.0	.0 (24)
AMMONIUM PERCHLORATE	.0	.0	.0	.0	.0	
ALUMINUM POWDER	.0	.0	.0	.0	.0	
FERRIC OXIDE	.0	.0	.0	.0	.0	
POLYMER & EPOXY RESIN	.0	.0	.0	.0	.0	
STA. SET= 32 CAT= SB DETERGENT WASHWATER ⁽³⁵⁾	29029.8	64000.0	348357.1	768000.0	.0	.0
STA. SET= 32 CAT= SB PORTABLE RINSE WATER	100394.6	221333.3	1204735.0	2656000.0	.0	.0
STA. SET= 32 CAT= SB DEIONIZED RINSE WATER	46991.9	103600.0	563903.0	1243200.0	.0	.0
STA. SET= 32 CAT= SI SRB RINSE WATER	18143.6	40000.0	217723.2	480000.0	.0	.0
STA. SET= 32 CAT= SO SOLVENTS FREON TMC/TN SOLVENTS, UNSPECIFIED	8.8 ⁽²⁶⁾	19.5 ⁽²⁶⁾	106.1 ⁽²⁶⁾	234.0 ⁽²⁶⁾	.0	.0
SUBTOTAL FOR SET 32	362525.1	799255.4	4350302.0	9590824.0	.0	.0
STA. SET= 33 CAT= CA AIR FILTERS	3.8 ⁽²¹⁾	8.3 ⁽²¹⁾	45.4 ⁽²¹⁾	100.0 ⁽²¹⁾	.0	.0
STA. SET= 33 CAT= EW WASTEWATER FROM EJECTS	157.6	347.5	1891.5	4170.0		
STA. SET= 33 CAT= HF HYDRAULIC FLUIDS					.0	.0
SUBTOTAL FOR SET 33	161.4	355.8	1936.8	4270.0	.0	.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 17

WASTE MATERIAL	BASELINE MONTHLY POUNDS	KILOGRAMS	BASELINE YEARLY POUNDS	KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
STA.SET= 99 CAT= AW GX-6300 ABLATOR ADHESIVE	4.9	10.8	59.0	5.9	130.0 .0
RESIN STM L 663	.5	1.1			13.0 .0
RESIN STM L 664	1.8	4.0	21.8	48.0	
SILICA POWDER	.2	.3	1.8	4.0	
CARBON POWDER	.2	.3	1.8	4.0	
CURING AGENT L 663	.2	.4	2.3	5.0	
CURING AGENT L 664	<.1	.1	.5	1.0	
HEPTANE	2.0	4.3	23.6	52.0	
XYLENE	.1	.3	1.4	3.0	
STA.SET= 99 CAT= AW ISOCHM POLYESTER RESIN ADHESV	4.9	10.8	59.0	130.0	.0
STYRENE					.0
MEK PEROXIDE CATALYST					.0
DIMETHYL PHthalATE					.0
STA.SET= 99 CAT= CA FILTER					.0
STA.SET= 99 CAT= CH SOLVENT CONTAMINATED CONTAINER SOLVENTS(36)	1.9 ⁽²⁸⁾	4.2 ⁽²⁸⁾	22.7 ⁽²⁸⁾	50.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CH PRIMER CONTAMINATED CONTAINERS	.3 ⁽²⁸⁾	.6 ⁽²⁸⁾	3.2 ⁽²⁸⁾	7.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CH ADHESIVE CONTAMINATED CONTAINR	.3 ⁽²⁸⁾	.6 ⁽²⁸⁾	3.2 ⁽²⁸⁾	7.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CH SOLVENT CCONTAINERS					.0
STA.SET= 99 CAT= CH POUR FOAM CONTAINERS	16.9 ⁽²⁸⁾	41.7 ⁽²⁸⁾	226.8 ⁽²⁸⁾	500.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CH ABLATOR CONTAMINATED CONTAINER	.3 ⁽²⁸⁾	.6 ⁽²⁸⁾	3.2 ⁽²⁸⁾	7.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CR SOLVENT CONTAMINATED RAGS	3.8 ⁽⁹⁾	6.3 ⁽⁹⁾	45.4 ⁽⁹⁾	100.0 ⁽⁹⁾	.0
STA.SET= 99 CAT= CR ADHESIVE CONTAMINATED RAGS	3.8 ⁽⁹⁾	8.3 ⁽⁹⁾	45.4 ⁽⁹⁾	100.0 ⁽⁹⁾	.0
STA.SET= 99 CAT= CR EPOXY PRIMER-CONTAMINATED RAGS	1.9 ⁽⁹⁾	4.2 ⁽⁹⁾	22.7 ⁽⁹⁾	50.0 ⁽⁹⁾	.0
STA.SET= 99 CAT= IN BX-250 FOAM <SOFT>	98.3	216.7	1179.3	2600.0	.0
(CONT.)					.0

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

PAGE 18

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE MONTHLY POUNDS	YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
DIPHENYL METHANE DIISOCYANATE	24.6	54.2	294.8	650.0		
FREON 11	15.9	35.0	190.5	420.0		
AMINES	8.7	19.2	104.3	230.0		
POLYOLS						
SUPER MEK PEROXIDE						
POLYESTER RESIN						
DIMETHYL PHTHALATE						
STA. SET= 99 CAT= IN POUR FOAM (MIXED) ⁽²⁹⁾	103.9 ⁽³⁷⁾	229.2 ⁽³⁷⁾	1247.4 ⁽³⁷⁾	2750.0 ⁽³⁷⁾	.0	.0
POLYURETHANE						
STA. SET= 99 CAT= IN POUR FOAM PART A (UNMIXED) ⁽³⁰⁾	5.3	11.7	63.5	140.0	.0	.0
DIPHENYL METHANE DIISOCYANATE	2.6	5.8	31.8	70.0		
FREON 11	1.7	3.8	20.4	45.0		
POLYOLs, AMINES	.9	2.1	11.3	25.0		
STA. SET= 99 CAT= IN POUR FOAM PART B (UNMIXED) ⁽³⁰⁾	5.3	11.7	63.5	140.0	.0	.0
FREON 11	1.1	2.3	12.7	28.0		
AMINE CATALYST	.1	.3	1.4	3.0		
POLYETHER POLYOL BLEND	4.1	9.1	49.4	109.0		
STA. SET= 99 CAT= IN POUR FOAM CONTAMINATED PAPER	1.2 ⁽²⁸⁾	2.8 ⁽²⁸⁾	15.0 ⁽²⁸⁾	33.0 ⁽²⁸⁾	.0	.0
SUPER LIGHT ABLATOR (I)						
RESIN STM L664, PT A	3.8	8.3	45.4	100.0	.0	.0
SILICA FIBERS	2.2	4.9	26.8	59.0		
CORK	.2	.5	2.7	6.0		
PHENOLIC MICROSPHERES	.5	1.0	5.4	12.0		
SILICA MICROSPHERES	.1	.3	1.4	3.0		
CURING AGENT	.5	1.2	6.4	14.0		
.2	.5	2.7	6.0			
STA. SET= 99 CAT= IN SUPER LIGHT ABLATOR (II)	3.8	8.3	45.4	100.0	.0	.0
RESIN STM L664, PT A	1.1	2.5	13.6	30.0		
CARBON POWDER						
SILICA FIBERS						
CORK						
SILICA MICROSPHERES						
PHENOLIC MICROSPHERES						
CURING AGENT STM L664, PT B	.6	1.4	7.7	17.0		
STA. SET= 99 CAT= IN POUR FOAM "TRIMMINGS"	3.8	8.3	45.4	100.0	.0	.0
POLYURETHANE						

TABLE 11 (CONT.)

HAZARDOUS WASTE GENERATION FOR 1987

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WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 99 CAT= FA EPOXY PRIMER METHYLENE ISOBUTYL KETONE	< .1 (27)	.1 (27)	.5 (27)	1.0 (27)	.0
XYLENE					.0
CYCLOHEXANONE					
CHROMATES					
INORGANIC PIGMENTS					
N-BUTANOL					
TOLUENE					
AMINO SILANE					
METHYL ETHYL KETONE					
STA. SET= 99 CAT= PA D.C. 120C VM AND P HAPTHA ORGANOMETALLIC SALTS	< .1 (27)	.1 (27)	.5 (27)	1.0 (27)	.0
STA. SET= 99 CAT= SO FREON TMC	.1 (27)	.3 (27)	1.4 (27)	3.0 (27)	.0
STA. SET= 99 CAT= SO 1,1,1-TRICHLOROETHANE	.1 (27)	.3 (27)	1.4 (27)	3.0 (27)	.0
STA. SET= 99 CAT= SO MEK & CELLOSOLVE	10.2	22.4	122.0	269.0	.0
STA. SET= 99 CAT= SO HEPTANE	62.6	137.9	750.7	1655.0	.0
STA. SET= 99 CAT= SO CELLOSOLVE ACETATE	89.2	196.7	1070.5	2360.0	.0
STA. SET= 99 CAT= SO METHYL ETHYL KETONE	73.7	162.4	884.0	1949.0	.0
STA. SET= 99 CAT= SR SOLVENT REDUCER METHYL ETHYL KETONE	.5	1.0	5.4	12.0	.0
CYCLOHEXANONE	.3	.7	3.6	8.0	.0
SOLVENT CONTAMINATED WATER	.2	.3	1.8	4.0	.0
SUBTOTAL FOR SET 99	67.5	148.8	810.1	1786.0	.0
	570.1	1256.9	6841.5	15083.0	.0
TOTAL FOR ALL SETS	856643.6	1910632.3	10399724.0	22927588.0	131188.9
					289223.5

TABLE 11 (CONT.)
HAZARDOUS WASTE GENERATION FOR 1987
SUMMARY BY CATEGORY

CATEGORY	BASELINE MONTHLY			YEARLY			CONTINGENCY PER YEAR KILOGRAMS POUNDS
	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	
SO	6884.6	15177.9	52614.6	182135.0	0	0	0
EW	11260.9	24826.2	135130.8	297914.1	0	0	0
FO	31.8	70.0	381.0	840.0	0	0	0
FS	3381.1	7454.2	40573.6	89450.0	0	0	0
OS	1027.2	2264.5	12325.9	27174.0	0	0	0
HF	335.5	739.6	4025.6	8875.0	0	0	0
A4	24.0	52.9	288.0	635.0	0	0	0
CN	2333.9	5145.4	28006.9	61745.0	0	0	0
CR	32.1	70.8	385.6	850.0	0	0	0
HS	3232.6	7126.7	38791.0	85520.0	0	0	0
HY	355.6	784.0	4267.4	9408.0	44930.6	99055.5	0
JN	983.0	2167.2	11796.1	26006.0	0	0	0
MH	389.7	859.2	4676.5	10310.0	6464.6	14252.0	0
NH	30.2	66.7	362.9	800.0	47.2	104.0	0
FJ	364.0	802.4	4367.6	9625.0	65050.2	143412.0	0
PA	68.4	150.8	821.0	1810.0	0	0	0
SU	1273.6	2807.9	15283.7	33695.0	0	0	0
UP	3.8	8.3	45.4	100.0	0	0	0
PS	0	0	0	0	504379.8	1111973.0	0
QU	473245.6	1043333.4	5678946.0	12520000.0	0	0	0
AL	0	0	0	0	0	0	0
CA	41.6	91.7	499.9	1100.0	0	0	0
PV	126.2	278.3	1515.0	3340.0	0	0	0
BA	61.7	136.0	740.3	1632.0	0	0	0
CB	90.7	200.0	1088.6	2400.0	0	0	0
CS	12095.7	26666.7	145148.8	320000.0	0	0	0
CU	0	0	0	0	0	0	0
JW	154409.6	340416.7	1852915.0	4085000.0	0	0	0
PR	0	0	0	0	0	0	0
SB	176416.3	388933.3	2116995.0	4667200.0	0	0	0
SI	18143.6	40000.0	217723.2	480000.0	0	0	0
SR	.5	1.0	5.4	12.0	.0	.0	.0

* For footnotes, see Table 8.

TABLE 12. HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 * PAGE 1

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
STA. SET= 0 ⁽²⁾ CAT= SO CONTAMINATED FREON	2971.0 ⁽³⁾	6550.0 ⁽³⁾	35652.2 ⁽³⁾ 78600.0 ⁽³⁾ .0 .0
SUBTOTAL FOR SET 0	2971.0	6550.0	35652.2 78600.0 .0 .0
STA. SET= 17 CAT= EW WASTEWATER FROM EEWAS	3406.7	7510.5	40880.3 90126.0 .0 .0
STA. SET= 17 CAT= FO DIESEL FUEL			.0 .0 .0 .0
STA. SET= 17 CAT= FO DIESEL FUEL & OIL			.0 .0 .0 .0
STA. SET= 17 CAT= FS CONTAMINATED DILUTION WATER MMH	.0	.0	.0 .0 .0 .0
STA. SET= 17 CAT= OS CONTAMINATED DILUTION WATER H2O4	.0	.0	.0 .0 .0 .0
SUBTOTAL FOR SET 17	3406.7	7510.5	40880.3 90126.0 .0 .0
STA. SET= 18 CAT= HF HYDRAULIC FLUIDS	5.4	11.9	64.6 142.5 .0 .0
SUBTOTAL FOR SET 18	5.4	11.9	64.6 142.5 .0 .0
STA. SET= 19 CAT= AW TPS ADHESIVE, RTV 566/577 PHENYL METHYL POLYSILOXANE TIN OXIDE IRON OXIDE SILICON HARDENER	1.4	3.1	17.0 37.5 .0 .0
STA. SET= 19 CAT= AW EA 911 EPOXY (CONT.)			.0 .0 .0 .0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 2

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY FEP YEAR KILOGRAMS	CONTINGENCY FEP YEAR POUNDS
EPOXY				
ZINC CHROMATE				
ASBESTOS				
MERCAPTAN				
DIMETHYLAMINE				
STA. SET= 19 CAT= AW				
EA 934 EPOXY	.0	.0		
EPOXY RESIN				
ASBESTOS				
STA. SET= 19 CAT= AW				
EA 9309 EPOXY				
EPOXY RESIN	.0	.0		
GLASS FIBERS				
ACRYLONITRILE/BUTADIEN/STYRENE				
ASBESTOS				
POLYGLYCOL DIAMINE				
SILANE				
STA. SET= 19 CAT= CN				
SPRAYCANS OF TPS SEALER				
FLUORINATED SOLVENT				
FREON 113				
STA. SET= 19 CAT= CN				
KOROPON PRIMER CONTAM CANS	8.5 ⁽⁶⁾	18.8 ⁽⁶⁾	102.1 ⁽⁶⁾	225.0 ⁽⁶⁾
BUTYL ACETATE				
METHYL ETHYL KETONE				
TOLUENE				
TALC - MG SILICATES				
EPOXY RESIN				
STA. SET= 19 CAT= CN				
LACQUER SPRAY CANS	3.4 ⁽⁷⁾	7.5 ⁽⁷⁾	40.8 ⁽⁷⁾	90.0 ⁽⁷⁾
PIGMENT SOLIDS				
VEHICLE SOLIDS				
TOLUENE				
XYLENE				
HYDROCARBON PROPELLANT				
PETROLEUM DISTILLATES				
STA. SET= 19 CAT= CN				
ISP CONTAM CUPS & WOOD STICKS	.9 ⁽⁸⁾	1.9 ⁽⁸⁾	10.2 ⁽⁸⁾	22.5 ⁽⁸⁾
INSTANT SET POLYMER				
STA. SET= 19 CAT= CN				
MARSHALL STENCIL INK SPRAYCANS	.3 ⁽⁷⁾	.8 ⁽⁷⁾	4.1 ⁽⁷⁾	9.0 ⁽⁷⁾
XYLENE				
(CONT.)				

TABLE 12 <CONT. >

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 3

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
	POUNDS	POUNDS	POUNDS
NAPHTHA			
OTHER MATERIALS			
STA. SET= 19 CAT= CN LACQUER SPRAYCANS	2.7 ⁽⁷⁾	6.0 ⁽⁷⁾	32.7 ⁽⁷⁾
PIGMENT SOLIDS			
VEHICLE SOLIDS			
TOLUENE			
XYLENE			
HYDROCARBON PROPELLANT			
PETROLEUM DISTILLATES			
STA. SET= 19 CAT= CN ENAMEL SPRAYCANS	5.1 ⁽⁷⁾	11.3 ⁽⁷⁾	61.2 ⁽⁷⁾
STA. SET= 19 CAT= CN ZINC CHROMATE PRIMER CANS	5.1 ⁽⁷⁾	11.3 ⁽⁷⁾	61.2 ⁽⁷⁾
STA. SET= 19 CAT= CN CONTAMINATED TARE CUPS			
EA 911 EPOXY			
EA 934 EPOXY			
EA 9309 EPOXY			
STA. SET= 19 CAT= CR RAGS WITH SOLVENTS, GREASES	5.7 ⁽⁹⁾	12.5 ⁽⁹⁾	63.0 ⁽⁹⁾
STA. SET= 19 CAT= CR SOLVENT-CONTAM CHEESECLOTH			
ISOPROPYL ALCOHOL			
METHYL ETHYL KETONE			
1,1,1-TRICHLOROETHANE			
STA. SET= 19 CAT= CR MEK & IPA CONTAM CHEESECLOTH			
METHYL ETHYL KETONE			
ISOPROPYL ALCOHOL			
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH			
ISOPROPYL ALCOHOL			
STA. SET= 19 CAT= CR TCE CONTAMINATED CHEESECLOTH			
1,1,1-TRICHLOROETHANE			
STA. SET= 19 CAT= CR MEK CONTAMINATED CHEESECLOTH			
METHYL ETHYL KETONE			

TABLE 12 (CGHT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 4

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0		.0
STA. SET= 19 CAT= CR SOLID FILM LUBRIC CONT CHSECLTH			.0		.0
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL			.0		.0
STA. SET= 19 CAT= CR DICHLOROMETHANE CONT CHSECLTH			.0		.0
STA. SET= 19 CAT= CR CONTAM CLOTHES, CLOTH & DEBRIS KOROFON BASE PRIMER KOROFON ACTIVATOR BERYLLIUM DUST	5.7 ⁽¹⁰⁾	12.5 ⁽¹⁰⁾	68.0 ⁽¹⁰⁾	150.0 ⁽¹⁰⁾	.0
STA. SET= 19 CAT= EW WASTEWATER FROM EEW43	3785.2 ⁽⁴⁾	8345.0 ⁽⁴⁾	45422.5 ⁽⁴⁾	100140.0 ⁽⁴⁾	
STA. SET= 19 CAT= FS WASTEWATER FROM PAYLOAD/ORB MMH	680.4 68.0	1500.0 150.0	8164.6 816.5	18000.0 1800.0	.0
STA. SET= 19 CAT= FS WASTE FUEL AND PRIMOL 355 ⁽¹¹⁾ HYDRAZINE & MMH	45.4 2.3	100.0 5.0	544.3 27.2	1200.0 60.0	
STA. SET= 19 CAT= HF VACUUM PUMP OIL TEXACO REGAL OIL 068	5.7	12.5	68.0	150.0	.0
STA. SET= 19 CAT= HS FUEL SCRUBBER HYDRAZINE & MMH	3175.1 63.5	7000.0 140.0	38101.6 762.0	84000.0 1580.0	.0
STA. SET= 19 CAT= HY HYDRAZINE	.0	.0	.0	.0	2494.7 ⁽¹²⁾
STA. SET= 19 CAT= HY HYDRAZINE	85.0	187.5	1020.6	2250.0	34.0 ⁽¹²⁾
STA. SET= 19 CAT= IN POLYURETHANE FOAM	5.7	12.5	68.0	150.0	.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 5

WASTE MATERIAL	BASELINE MONTHLY POUNDS KILOGRAMS	YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
STA. SET= 19 CAT= IN ALUMACAST A/B MIXTURE POLYOXYPROPYLENE PENTAMERIC TOL AROMATIC WHITE OIL INERT ALUMINIZED PARTICLES DIPHENYLMETHANE DIISOCYANATE POLYMERS OF DPM DIISOCYANATE	.2	.4	2.0	4.5 .0 .0
STA. SET= 19 CAT= IN INSTANT SET POLYMER SCRAPS DIPHENYL METHANE DIISOCYANATE POLY(OXALKYLENE)POLY(ETHER AROMATIC HYDROCARBONS	2.3(13)	5.0(13)	27.2(13)	60.0(13) .0 .0
STA. SET= 19 CAT= IN SILANE/ACETIC ACID RESIDUE METHYL TRIMETHOXYSILANE ACETIC ACID	.6	1.3	6.8	15.0 .0 .0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	44.2	97.5	530.7	1170.0 .0 .0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	11.3	25.0	136.1	300.0 .0 .0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE(14)	23.5(15)	51.8(15)	281.7(15)	621.0(15) 107.3(12) 236.5(12)
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE(14)	23.5(15)	51.0(15)	281.7(15)	621.0(15) 148.3(12) 327.0(2)
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE(14)	16.7(15)	36.8(15)	200.0(15)	441.0(15) 182.8(12) 403.0(12)
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE(14)	52.0(15)	114.8(15)	624.6(15)	1377.0(15) .0 .0
STA. SET= 19 CAT= NH WASTEWATER WITH AMMONIA	45.4(15)	100.0(15)	544.3(15)	1200.0(15) .0 .0
STA. SET= 19 CAT= NO NITROGEN TETROXIDE	6.8	15.0	81.6	180.0 .0 .0
STA. SET= 19 CAT= NO NITROGEN TETROXIDE	12.2	27.0	147.0	324.0 .0 .0
STA. SET= 19 CAT= NO NITROGE, TETROXIDE	42.9(15)	94.5(15)	514.4(15)	1134.0(15) 163.1(12) 359.5(12)

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 6

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	42.9 ⁽¹⁵⁾	94.5 ⁽¹⁵⁾	514.4 ⁽¹⁵⁾	1134.0 ⁽¹⁵⁾	232.9 ⁽¹²⁾
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	29.8 ⁽¹⁵⁾	65.8 ⁽¹⁵⁾	357.9 ⁽¹⁵⁾	789.0 ⁽¹⁵⁾	286.2 ⁽¹²⁾
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	99.3 ⁽¹⁵⁾	219.0 ⁽¹⁵⁾	1192.0 ⁽¹⁵⁾	2628.0 ⁽¹⁵⁾	.0
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	.0
STA.SET= 19 CAT= OS DECONTAMINATE FROM PAYLOAD/ORB N204	362.9	800.0	4354.5	9600.0	.0
	3.4	7.5	40.8	90.0	.0
STA.SET= 19 CAT= OS WASTE OXIDIZER AND PRIMOL 355 ⁽¹¹⁾ N204	46.5	102.5	557.9	1230.0	.0
	3.4	7.5	40.8	90.0	.0
STA.SET= 19 CAT= PA KOROPON PRIMER CONT PNT BRUSHES BUTYL ACETATE TALC - Mg SILICATES EPOXY RESIN	22.7 ⁽¹⁶⁾	50.0 ⁽¹⁶⁾	272.2 ⁽¹⁶⁾	600.0 ⁽¹⁶⁾	.0
					.0
STA.SET= 19 CAT= PA LACQUER #626486	.7 ⁽¹⁷⁾	1.6 ⁽¹⁷⁾	8.8 ⁽¹⁷⁾	19.5 ⁽¹⁷⁾	.0
					.0
STA.SET= 19 CAT= PA CONTAMINATED BRUSHES ORGANIC ZINC PRIMER ZINC CHROMATE PRIMER	2.3 ⁽¹⁶⁾	5.0 ⁽¹⁶⁾	27.2 ⁽¹⁶⁾	60.0 ⁽¹⁶⁾	.0
					.0
STA.SET= 19 CAT= PA ORGANIC ZINC PRIMER ZINC DUST BARYTES MOLYBDATE ORANGE SILICA HIGH MOLECULAR WEIGHT EPOXY CELLOSOLVE ACETATE TOLUENE METHYL ETHYL KETONE	7.1 ⁽¹⁸⁾	15.6 ⁽¹⁸⁾	85.0 ⁽¹⁸⁾	187.5 ⁽¹⁸⁾	.0
					.0
STA.SET= 19 CAT= PA CONTAMINATED PAINT BRUSHES EA 911 EPOXY (CONT.)	2.3 ⁽¹⁶⁾	5.0 ⁽¹⁶⁾	27.2 ⁽¹⁶⁾	60.0 ⁽¹⁶⁾	.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 7

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE MONTHLY POUNDS	YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
EA 934 EPOXY EA 9309 EPOXY						
STA. SET= 19 CAT= SO DOPE & LACQUER THINNER ALIPHATIC NAPHTHA ESTER OR KETONE ISO- OR n-BUTYL ACETATE ISO- OR n-BUTYL ALCOHOL	1.0 .2 .5 .3 .1	2.3 .4 1.0 .6 .3	12.2 2.0 5.4 3.4 1.4	27.0 4.5 12.0 7.5 3.0	.0	.0
STA. SET= 19 CAT= SW WASHWATER WITH MEK METHYL ETHYL KETONE	53.0 7.7	116.9 16.9	636.2 91.9	1402.5 202.5	.0	.0
SUBTOTAL FOR SET 19	8773.2	19341.8	105278.7	232101.0	7731.7	17045.5
STA. SET= 21 CAT= EW WASTEWATER FROM EEW&S	3406.7 ⁽⁴⁾	7510.5 ⁽⁴⁾	40880.3 ⁽⁴⁾	90126.0 ⁽⁴⁾		
STA. SET= 21 CAT= FS WASTEWATER WITH MMH MMH	134.9 12.5	297.5 27.5	1619.3 149.7	3570.0 330.0	.0	.0
STA. SET= 21 CAT= HS FUEL SCRUBBER MMH	453.6 8.3	1000.0 18.3	5443.1 99.3	12000.0 219.0	.0	.0
STA. SET= 21 CAT= IN TILE REPAIR FOAM POLYURETHANE	5.7 5.7	12.5 12.5	68.0 68.0	150.0 150.0	.0	.0
STA. SET= 21 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	.0	.0	.0
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	24493.9 ⁽¹⁹⁾	54000.0 ⁽¹⁹⁾
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	18.7	41.3	224.5	495.0	.0	.0
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	64.1	141.3	768.8	1695.0	.0	.0
STA. SET= 21 CAT= OS WASTEWATER WITH OXIDIZER	.0	.0	.0	.0	4898.8 ⁽²⁰⁾	10800.0 ⁽²⁰⁾
	200.5	1091.3	2406.0	.0	.0	.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 8

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS POUNDS	BASELINE YEARLY KILOGRAMS POUNDS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
H204	.7	1.5	8.2
STA.SET= 21 CAT= SW WASTEWATER WITH MEK METHYL ETHYL KETONE	53.0 7.6	116.8 16.8	635.5 91.2
STA.SET= 21 CAT= WP WASTE SEALS, FILTERS, ETC.	5.7 ⁽²¹⁾	12.5 ⁽²¹⁾	68.0 ⁽²¹⁾
SUBTOTAL FOR SET 21	4233.2	9332.8	50798.9
STA.SET= 23 CAT= EW WASTEWATER FROM EEW4S	3785.2	8345.0	45422.5
STA.SET= 23 CAT= FS HYDRAZINE-CONTAM. WASTEWATER HYDRAZINE	703.9 35.2	1565.0 77.5	8518.4 421.8
STA.SET= 23 CAT= FS HYDRAZINE-CONTAM. CLNUP WATER HYDRAZINE	236.4 2.6	521.3 5.8	2837.2 31.3
STA.SET= 23 CAT= FS WASTEWATER FROM PPR HYDRAZINE	2838.9	6258.8	34066.9
STA.SET= 23 CAT= FS PRIMOL 35(11) HYDRAZINE MMH	425.8	938.8	5109.7
STA.SET= 23 CAT= HF HYDRAULIC FLUIDS TETRAURTHOCRESOL PHOSPHATE	492.1 492.1	1085.0 1085.0	5905.7 5905.7
STA.SET= 23 CAT= HS HYDRAZINE & MMH SCRUBBER MMH	946.3 ⁽¹⁸⁾ 21.0 16.4	2086.3 ⁽¹⁸⁾ 46.3 36.3	11355.6 ⁽¹⁸⁾ 251.7 197.3
STA.SET= 23 CAT= HY HYDRAZINE	260.2	573.8	3123.0
STA.SET= 23 CAT= HY LM PROPELLANT PARAHYDRAZINE (CONT.)	.0 .0	.0 .0	.0 .0
			39689.1 ⁽²²⁾
			87500.0 ⁽²²⁾

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 9

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	KILOGRAMS POUNDS	CONTAMINANCY PER YEAR KILOGRAMS	POUNDS
UNSYM DIMETHYLHYDRAZINE	.0	.0	.0	.0	.0
STA. SET= 23 CAT= HY HYDRAZINE	.0	.0	.0	.0	2712.7 ⁽²²⁾ 5980.5 ⁽²²⁾
STA. SET= 23 CAT= IN K5NA INSULATION BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED	13.0	28.0	156.5	345.0	.0 .0
STA. SET= 23 CAT= MH MONOMETHYL HYDRAZINE	413.3	911.3	4960.0	10935.0	.0 .0
STA. SET= 23 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	.0	6026.2 ⁽²²⁾ 13285.5 ⁽²²⁾
STA. SET= 23 CAT= MH AMMONIA	.0	.0	.0	.0	47.2 ⁽²²⁾ 104.0 ⁽²²⁾
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	229.2	505.4	2750.8	6064.5	.0 .0
STA. SET= 23 CAT= NO LBM OXIDIZER NITROGEN TETROXIDE	.0	.0	.0	.0	39689.1 ⁽²²⁾ 87500.0 ⁽²²⁾
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	.0	.0	.0	.0	14064.9 ⁽²²⁾ 31008.0 ⁽²²⁾
STA. SET= 23 CAT= OS N204 CONTAM. CLEANUP WATER NITROGEN TETROXIDE	141.7	312.5	1701.0	3750.0	37.5
STA. SET= 23 CAT= OS N204 CONTAM. WASTEWATER NITROGEN TETROXIDE	472.9	1042.5	5674.4	12510.0	930.0
STA. SET= 23 CAT= OS PRIMOL 355 ⁽¹¹⁾ N204	425.8	938.8	5109.7	11265.0	
STA. SET= 23 CAT= PS SRB PROPELLANT SPILL ⁽²³⁾ AMMONIUM PERCHLORATE ALUMINUM POWDER PBAN BINDER HTPB BINDER IRON OXIDE	.0	.0	.0	.0	504301.3 ⁽²⁴⁾ 1111800.0 ⁽²⁴⁾
STA. SET= 23 CAT= QU DELUGE WATER (CONT.)	709868.3	1565000.0	8518420.0	18780000.0	.0 .0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 10

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY POUNDS	KILOGRAMS	CONTINGENCY PER YEAR POUNDS
ALUMINUM OXIDE	4.2	9.3	50.3	111.0
AMMONIA	.3	.6	3.4	7.5
HYDROCHLIC ACID	453.0	998.8	5436.3	11985.0
ORGANIC SOLVENT	4.3	9.4	51.0	112.5
STA. SET= 23 CAT= SO SOLVENT IN TIRE FREON TI-F SYN. TEI LOROETHANE	364.3 (25)	803.3 (25)	4372.2 (25)	9639.0 (25) .0
STA. SET= 23 CAT= SO CONTAMINATED SOLVENTS	331.1 (26)	730.0 (26)	3973.4 (26)	8760.0 (26) .0
STA. SET= 23 CAT= SW SOLVENT WASTEWATER UNSPEC.	520.5 (18)(25)	1147.5 (18)(25)	6245.9 (18)(25)	13770.0 (18)(25) .0
STA. SET= 23 CAT= SW CONTAMINATED WASTEWATER SOLVENTS CHLORINATED RUBBER ZINC PRIMER	1182.7 (18)	2607.5 (18)	14192.8 (18)	31290.0 (18) .0
SUBTOTAL FOR SET 23	723658.3	1595401.8	8683898.0	19144820.0 1022229.2 225378.0
STA. SET= 31 CAT= AL SURFACTANT NaOH SODIUM TRIPOLYPHOSPHATE				.0 .0
STA. SET= 31 CAT= AW EA 934 EPOXY ADHESIVE EPOXY RESIN ASBESTOS FILLERS POLYAMIDE DIETHYLENETRIAMINE	19.8 (26)(27)	43.8 (26)(27)	238.1 (26)(27)	525.0 (26)(27) .0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	28.3	62.5	340.2	750.0 .0
STA. SET= 31 CAT= CA CHARCOAL FILTER WASTES				.0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	28.3	62.5	340.2	750.0 .0
STA. SET= 31 CAT= CN BOSTIK PRIMER PAINT CANS	8.5 (6)	18.8 (6)	102.1 (6)	225.0 (6) .0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 11

WASTE MATERIAL	KILOGRAMS	MONTHLY POUNDS	BASELINE KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 31 CAT= CN BOSTIK TOPCOAT PAINT CANS	25.5 ⁽⁶⁾	56.3 ⁽⁶⁾	306.2 ⁽⁶⁾	675.0 ⁽⁶⁾	.0	.0
STA. SET= 31 CAT= CN RUSTOLEUM PRIMER PAINT CANS	1.1 ⁽⁶⁾	2.5 ⁽⁶⁾	13.6 ⁽⁶⁾	30.0 ⁽⁶⁾	.0	.0
STA. SET= 31 CAT= CN RUSTOLEUM TOPCOAT PAINT CANS	1.1 ⁽⁶⁾	2.5 ⁽⁶⁾	13.6 ⁽⁶⁾	30.0 ⁽⁶⁾	.0	.0
STA. SET= 31 CAT= CN MSA-1 EMPTY CONTAINERS	567.0 ⁽²⁸⁾	1250.0 ⁽²⁸⁾	6803.8 ⁽²⁸⁾	15000.0 ⁽²⁸⁾	.0	.0
STA. SET= 31 CAT= CN K5HA CONTAINERS	4.3	9.4	51.0	112.5	.0	.0
STA. SET= 31 CAT= CN K5HA & MTA-2 PACKING MATERIALS	2834.9 ⁽²⁸⁾	6250.0 ⁽²⁸⁾	34019.3 ⁽²⁸⁾	75000.0 ⁽²⁸⁾	.0	.0
STA. SET= 31 CAT= CR SOLVENT CONTAMINATED RAGS	5.7 ⁽⁹⁾	12.5 ⁽⁹⁾	68.0 ⁽⁹⁾	150.0 ⁽⁹⁾	.0	.0
STA. SET= 31 CAT= CR ALODINE CONTAMINATED RAGS	2.8 ⁽⁹⁾	6.3 ⁽⁹⁾	34.0 ⁽⁹⁾	75.0 ⁽⁹⁾	.0	.0
STA. SET= 31 CAT= CR RYMPLE CLOTHS	5.7 ⁽⁹⁾	12.5 ⁽⁹⁾	68.0 ⁽⁹⁾	150.0 ⁽⁹⁾	.0	.0
STA. SET= 31 CAT= CR PAINT DROP CLOTHS	8.5 ⁽⁹⁾	18.8 ⁽⁹⁾	102.1 ⁽⁹⁾	225.0 ⁽⁹⁾	.0	.0
STA. SET= 31 CAT= EW WASTEWATER FROM EEW&S	1514.1 ⁽⁴⁾	3338.0 ⁽⁴⁾	18169.0 ⁽⁴⁾	40056.0 ⁽⁴⁾		
STA. SET= 31 CAT= FO FUEL AND OIL SPILLS	.0	.0	.0	.0		
STA. SET= 31 CAT= FO FUEL & OIL WASTES	47.6	105.0	571.5	1260.0		
STA. SET= 31 CAT= FS PRIMOL 355(11)	.0	.0	.0	.0		
STA. SET= 31 CAT= HS SCRUBBER EFFLUENT	47.1 ⁽¹⁸⁾	103.8 ⁽¹⁸⁾	564.7 ⁽¹⁸⁾	1245.0 ⁽¹⁸⁾	.0	.0
STA. SET= 31 CAT= HY HYDRAZINE	136.8	301.6	1641.8	3619.5	.0	.0
STA. SET= 31 CAT= IN MSA-1 (CURED)(28)	113.4 ⁽²⁵⁾	250.0 ⁽²⁵⁾	1360.8 ⁽²⁵⁾	3000.0 ⁽²⁵⁾	.0	.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 12

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE MONTHLY POUNDS	YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
EPICLORHYDRIN/SGE GLASS ECOSPHERES PHENOLIC M ⁺ CROSPHENE ⁻ S GLASS FIBERS	45.4 13.4 40.2 5.0	100.1 29.5 88.6 11.0	545.0 160.6 482.4 59.9	1201.5 354.0 1063.5 132.0		
BENTONE 27	3.8	8.4	45.6	100.5		
METHYLENE DIAMINE m-PHENYLENE DIAMINE	4.0 1.6	8.8 3.6	47.6	105.0		
STA.SET= 31 CAT= IN MSA-1, PART A (UNMIXED) ⁽³⁾ , M-1ENE CHLORIDE E CLORHYDRIN/BGE		.0		.0		
STA.SET= 31 CAT= IN MSA-1, PART B (UNMIXED) ⁽³⁾ , METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIANILINE m-PHENYLENE DIAMINE ETHYL ALCOHOL PHENOLIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27		.0		.0		
STA.SET= 31 CAT= IN MTA-2 (CURED) ⁽²⁹⁾ , EPICLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES	56.7 17.5 17.5 7.0 .7 14.0	125.0 38.6 38.6 12.4 1. 3.	680.4 210.2 210.2 93.7 8.2 168.1	1500.0 463.5 463.5 184.5 18.0 370.5	.0	.0
STA.SET= 31 CAT= IN MTA-2 (UNMIXED) ⁽³⁰⁾ , EPICLORHYDRIN/SGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES METHYLENE CHLORIDE PERCHLOROETHYLENE	17.0 5.3 5.3 2.1 .2 4.2	37.5 11.6 11.6 4.6 - -	204.1 67.3 63.3 45.2 2.7 50.3	450.0 139.5 139.5 55.5 6.0 111.0	.0	.0
STA.SET= 31 CAT= IN K5NA BUTYL GLYCIDYL ETHER EPOXY RESINS	9.1 2.0	20.9	240.0	.0	.0	.0
STA.SET= 31 CAT= IN INSULATION AND PAPER				.0		

TABLE 12 (CONTR.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 13

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	CONTINGENCY KILOGRAMS	CONTINGENCY PER YEAR POUNDS
STA. SET= 31 CAT= PA BOSTIK EPOXY PRIMER EPOXY RESIN AMINE CURING AGENT TITANIUM DIOXIDE CHROMATE PIGMENTS INERT PIGMENTS SUSPENSION & FLOW CONTROL ADDI SOLVENTS	15.3 2.0 .3 .3 .7 2.2 1.1 9.2	33.9 4.4 .8 .8 1.5 4.8 .1 20.3	193.7 23.8 4.1 4.1 8.2 25.9 .7 110.2	405.0 52.5 9.0 9.0 18.0 57.0 1.5 243.0	.0 .0 .0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0 .0 .0
STA. SET= 31 CAT= PA BOSTIK EPOXY TOPCOAT EPICHLORHYDRIN/BISPHENOL A AMINE CURING AGENT COLOR PIGMENT SUSPENSION & FLOW CONTROL ADDI SOLVENTS PHOTOCHEM REACTIVE SOLVENTS NONPHOTOCHEM REACTIVE	21.0 5.1 .8 4.3 .3 2.0 8.5	46.3 11.3 1.8 9.4 .6 4.4 18.8	251.7 61.2 9.5 51.0 3.4 23.8 102.1	555.0 135.0 21.0 112.5 7.5 52.5 225.0	.0 .0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0 .0
STA. SET= 31 CAT= P RUSTOLEUM PRIMER SILICATES YELLOW IRON OXI. TITANIUM DIOXIDE CALCIUM BOROSILICATE BENTONITE LINSEED PHENOLIC ALKYL RESIN ALIPHATIC HYDROCARBONS DRIVERS AND ADDITIVES	4.5 .7 .3 .1 .9 <.1 .9 1.5 .1	10.0 1.6 .8 .3 1.9 .1 2.0 3.3 .3	54.4 8.8 4.1 1.4 10.2 .3 10.9 17.7 1.4	120.0 19.5 9.0 3.0 22.5 .6 24.0 39.0 3.0	.0 .0 .0 .0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0 .0 .0 .0
STA. SET= 31 CAT= PA RUSTOLEUM TOPCOAT SILICATES TITANIUM DIOXIDE BENTONITE CLAY TINTING COLORS ALKYL RESIN ALIPHATIC HYDROCARBONS DRIVERS & ADDITIVES	4.5 1.5 .8 <.1 .1 .8 1.4 .1	10.0 3.3 1.8 .1 .3 1.8 3.0 .1	54.4 17.7 9.5 .3 1.4 9.5 16.3 .7	120.0 39.0 21.0 .6 3.0 21.0 36.0 1.5	.0 .0 .0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0 .0 .0
STA. SET= 31 CAT= PA GACOFLEX TITANIUM DIOXIDE CLAY HYPALON HYDROCARBON RESIN PERCHLOROETHYLENE 1,1,1-TRICHLOROETHANE (CONT.)	22.1 1.5 1.8 2.2 .5 10.4 5.6	48.8 3.4 3.9 4.9 1.0 22.9 12.3	265.4 18.4 21.1 26.5 5.4 124.5 66.7	585.0 40.5 46.5 58.5 12.0 274.5 147.0	.0 .0 .0 .0 .0 .0 .0	.0 .0 .0 .0 .0 .0 .0

TABLE 12 <CONT. >

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 14

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS
EPEROXIDIZED SOYBEAN OIL	.2	.5	2.7
STA, SET= 31 CAT= PA PAINT-SPILL ABSORBANT	.0	.0	.0
STA, SET= 31 CAT= PW ALODINE CONTAMINATED WASTEWATER	189.4 ⁽¹⁸⁾ 3.3(31)	417.5 ⁽¹⁸⁾ 7.4 ⁽³¹⁾	2272.5 ⁽¹⁸⁾ 40. ⁽³¹⁾
CHROMIC ACID	1.9	4.1	22.5
FERRICYANIDE SALT	.1	.1	.7
COMPLEX FLUORIDE SALT			1.5
STA, SET= 31 CAT= SO PERCHLOROETHYLENE	.8	1.8	9.5
STA, SET= 31 CAT= SO TRICHLOROETHANE	.6	1.4	7.5
STA, SET= 31 CAT= SO FREON 113	.7	1.6	8.8
STA, SET= 31 CAT= SO MSA-1 CONTAMINATED MEC1	1881.8	4148.8	22582.0
STA, SET= 31 CAT= SO MSA-1 CONTAM PERCHLOROETHYLENE	2315.0	5103.8	27780.1
STA, SET= 31 CAT= SO PERCHLOROETHYLENE	347.0	765.0	4164.0
STA, SET= 31 CAT= SO TRICHLOROETHANE	102.1	225.0	1224.7
STA, SET= 31 CAT= SO METHYLENE CHLORIDE	319.8	705.0	3837.4
STA, SET= 31 CAT= SO MTA-2 CONTAMINATED SOLVENTS	662.2 ⁽²⁶⁾	1460. ⁽²⁶⁾	7946.9 ⁽²⁶⁾
STA, SET= 31 CAT= SO BOSTIK CONTAMINATED SOLVENTS	331.1 ⁽²⁶⁾	730. ⁽²⁶⁾	3973.4 ⁽²⁶⁾
STA, SET= 31 CAT= SO RUSTOLEUM CONTAMINATED SOLVENT	331.1 ⁽²⁶⁾	730. ⁽²⁶⁾	3973.4 ⁽²⁶⁾
SUBTOTAL FOR SET 31	12032.6	26527.5	144391.3
STA, SET= 32 CAT= BA LITHIUM STORAGE BATTERIES	30.6	67.5	367.4
			810.0
			.0
			.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 15

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	POUNDS
STA. SET= 32 CAT= BA SILVER-ZINC STORAGE BATTERIES	51.0	112.5	612.3	1350.0	.0
STA. SET= 32 CAT= BA POTASSIUM HYDROXIDE SOLUTION	10.9 ⁽¹⁸⁾	24.0 ⁽¹⁸⁾	130.6 ⁽¹⁸⁾	286.0 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= CB HYDRAZINE-CONTAMINATED WATER	136.1 ⁽¹⁸⁾	300.0 ⁽¹⁸⁾	1632.9 ⁽¹⁸⁾	3600.0 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER ⁽³²⁾	.0	.0	.0	.0	.0
STA. SET= 32 CAT= CS CONTAMINATED SEAWEATER ⁽³²⁾	18143.6	40000.0	217723.2	480000.0	.0
STA. SET= 32 CAT= CW SRB FWD SKT CLEANING WASTES					.0
STA. SET= 32 CAT= EW WASTEWATER FROM EEEWS	757.0 ⁽⁴⁾	1669.0 ⁽⁴⁾	9084.5 ⁽⁴⁾	20028.0 ⁽⁴⁾	.0
STA. SET= 32 CAT= FO BILGE WASTES					.0
STA. SET= 32 CAT= FO DIESEL FUEL & OIL SPILLS	.0	.0	.0	.0	.0
STA. SET= 32 CAT= FS WASTE FUEL & PRIMOL 355 ⁽¹¹⁾	.0	.0	.0	.0	.0
STA. SET= 32 CAT= HS HYDRAZINE SCRUBBER EFFLUENT HYDRAZINE	226.8 ⁽¹⁸⁾	500.0 ⁽¹⁸⁾	2721.5 ⁽¹⁸⁾	6000.0 ⁽¹⁸⁾	.0
STA. SET= 32 CAT= HY HYDRAZINE	2.0	4.5	24.5	54.0	.0
STA. SET= 32 CAT= IN INSULATION WASTES, SOLID ⁽³³⁾	51.3	113.1	615.7	1357.5	.0
MSA-1 INSULATION					.0
MTA-2 INSULATION					.0
K5NA INSULATION					.0
PR-855 INSULATION					.0
STA. SET= 32 CAT= IW INSULATION CONTAM FILTERS	5.7 ⁽²¹⁾	12.5 ⁽²¹⁾	68.0 ⁽²¹⁾	150.0 ⁽²¹⁾	.0
STA. SET= 32 CAT= IW INSULATION-CONTAMINATED WATER ⁽³³⁾	231614.4 ⁽¹⁸⁾	510625.0 ⁽¹⁸⁾	2779372.5 ⁽¹⁸⁾	6127500.0 ⁽¹⁸⁾	.0

TABLE 12 < CONT. >

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 16

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	YEARLY KILOGRAMS	BASELINE POUNDS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY PER YEAR POUNDS
MSA-1 INSULATION						
MTA-2 INSULATION						
K5NA INSULATION						
PR-855 INSULATION						
STA. SET= 32 CAT= PR PRESERVATIVE CHEMICALS PROTECTIVE LUBRICANTS						
STA. SET= 32 CAT= PS SRB SOLID PROPELLANT	.0	.0	.0	.0	.0	.0
AMMONIUM PERCHLORATE	.0	.0	.0	.0	.0	.0
ALUMINUM POWDER	.0	.0	.0	.0	.0	.0
FERRIC OXIDE	.0	.0	.0	.0	.0	.0
POLYMER & EPOXY RESIN	.0	.0	.0	.0	.0	.0
STA. SET= 32 CAT= SB DETERGENT WASHWATER(35)	43544.6	96000.0	522535.6	1152000.0	.0	.0
STA. SET= 32 CAT= SB POTABLE RINSE WATER	150591.9	332000.0	1807102.5	3984000.0	.0	.0
STA. SET= 32 CAT= SB DETONIZED RINSE WATER	70487.9	155400.0	845854.6	1864800.0	.6	.0
STA. SET= 32 CAT= SI SR2 RINSE WATER	27215.4	60000.0	326584.8	720000.0	.0	.0
STA. SET= 32 CAT= SO SOLVENTS FREDN TMC/TM SOLVENTS, UNSPECIFIED	13.3 ⁽²⁶⁾	29.3 ⁽²⁶⁾	159.2 ⁽²⁶⁾	351.0 ⁽²⁶⁾	.0	.0
SUBTOTAL FOR SET 32	543787.8	1198853.0	6525452.0	14386236.0	.0	.0
STA. SET= 33 CAT= CA AIR FILTERS	5.7 ⁽²¹⁾	12.5 ⁽²¹⁾	68.0 ⁽²¹⁾	150.0 ⁽²¹⁾	.0	.0
STA. SET= 33 CAT= EW WASTEWATER FROM EJECTS	235.4	521.3	2837.2	6255.0	.0	.0
STA. SET= 33 CAT= HF HYDRAULIC FLUIDS						
SUBTOTAL FOR SET 33	242.1	533.8	2905.2	6405.0	.0	.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 17

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	YEARLY POUNDS	CONTINGENCY PER YEAR KILOGRAMS	CONTINGENCY POUNDS
STA.SET= 99 CAT= AW GX-6300 ABLATOR ADHESIVE	7.4	16.3	88.5	195.0	.0
RESIN STM L 663	.7	1.6	8.8	19.5	.0
RESIN STM L 664	2.7	6.0	32.7	72.0	.0
SILICA POWDER	.2	.5	2.7	6.0	.0
CARBON POWDER	.2	.5	2.7	6.0	.0
CURING AGENT L 663	.3	.6	3.4	7.5	.0
CURING AGENT L 664	.1	.1	.7	1.5	.0
HEPTANE	2.9	6.5	35.4	76.0	.0
XYLENE	.2	.4	2.0	4.5	.0
STA.SET= 99 CAT= AW ISOCHEM POLYESTER RESIN ADHESY STYRENE	7.4	16.3	88.5	195.0	.0
MEK PEROXIDE CATALYST DIMETHYL PHTHALATE					.0
STA.SET= 99 CAT= CA FILTER					.0
STA.SET= 99 CAT= CN SOLVENT CONTAMINATED CONTAINER SOLVENTS(36)	2.8 ⁽²⁸⁾	6.3 ⁽²⁸⁾	34.0 ⁽²⁸⁾	75.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CN PRIMER CONTAMINATED CONTAINERS	.4 ⁽²⁸⁾	.9 ⁽²⁸⁾	4.8 ⁽²⁸⁾	10.5 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CN ADHESIVE CONTAMINATED CONTAINERS	.4 ⁽²⁸⁾	.9 ⁽²⁸⁾	4.8 ⁽²⁸⁾	10.5 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CN SOLVENT CONTAINERS					.0
STA.SET= 99 CAT= CN POUR FOAM CONTAINERS	26.3 ⁽²⁸⁾	62.5 ⁽²⁸⁾	340.2 ⁽²⁸⁾	750.0 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CN ABLATOR CONTAMINATED CONTAINER	.4 ⁽²⁸⁾	.9 ⁽²⁸⁾	4.8 ⁽²⁸⁾	10.5 ⁽²⁸⁾	.0
STA.SET= 99 CAT= CR SOLVENT CONTAMINATED RAGS	5.7 ⁽⁹⁾	12.5 ⁽⁹⁾	68.0 ⁽⁹⁾	150.0 ⁽⁹⁾	.0
STA.SET= 99 CAT= CR ADHESIVE CONTAMINATED RAGS	5.7 ⁽⁹⁾	12.5 ⁽⁹⁾	68.0 ⁽⁹⁾	150.0 ⁽⁹⁾	.0
STA.SET= 99 CAT= CR EPOXY PRIMER-CONTAMINATED RAGS	2.8 ⁽⁹⁾	6.3 ⁽⁹⁾	34.0 ⁽⁹⁾	75.0 ⁽⁹⁾	.0
STA.SET= 99 CAT= IN BY-25n FOAM (SOFT)	147.4	325.0	1769.0	3900.0	.0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 18

WASTE MATERIAL	BASELINE MONTHLY KILOGRAMS	BASELINE YEARLY KILOGRAMS	CONTINGENCY PER YEAR KILOGRAMS POUNDS
DIPHENYL METHANE DIISOCYANATE	36.9	81.3	442.3 975.0
FREON 11	23.8	52.5	285.8 630.0
AMINES	13.0	28.8	156.5 345.0
POLYOOLS			
SUPER MEK PEROXIDE			
POLYESTER RESIN			
DIMETHYL PHTHALATE			
STA. SET= 99 CAT= IN POUR FOAM "MIXED" ⁽²⁹⁾	155.9 ⁽³⁷⁾	343.8 ⁽³⁷⁾	1871.1 ⁽³⁷⁾ 4125.0 ⁽³⁷⁾
			.0 .0
STA. SET= 99 CAT= IN POUR FOAM PART A (UNMIXED) ⁽³⁰⁾	7.9	17.5	95.3 210.0
DIPHENYL METHANE DIISOCYANATE	4.0	8.8	47.6 105.0
FREON 11	2.6	5.6	30.6 67.5
POLYOOLS, AMINES	1.4	3.1	17.0 37.5
STA. SET= 99 CAT= IN POUR FOAM PART B (UNMIXED) ⁽³⁰⁾	7.9	17.5	95.3 210.0
FREON 11	1.6	3.5	19.1 42.0
AMINE CATALYST	.2	.4	2.0 4.5
POLYETHER POLYGL BLEND	6.2	13.6	74.2 163.5
STA. SET= 99 CAT= IN POUR FOAM CONTAMINATED PAPER	1.9 ⁽²⁸⁾	4.1 ⁽²⁸⁾	22.5 ⁽²⁸⁾ 49.5 ⁽²⁸⁾
			.0 .0
STA. SET= 99 CAT= IN SUPER LIGHT ABLATOR (I)	5.7	12.5	68.0 150.0
RESIN STM L664, PT A	3.3	7.4	40.1 88.5
SILICA FIBERS	.3	.8	4.1 9.0
CORK	.7	1.5	8.2 18.0
PHENOLIC MICROSPHERES	.2	.4	2.0 4.5
SILICA MICROSPHERES	.8	1.8	9.5 21.0
CURING AGENT	.3	.8	4.1 9.0
STA. SET= 99 CAT= IN SUPER LIGHT ABLATOR (II)	5.7	12.5	68.0 150.0
RESIN STM L664, PT A	1.7	3.8	20.4 45.0
CARBON POWDER			
SILICA FIBERS			
SILIC MICROSPHERES			
PHENOLIC MICROSPHERES			
CURING AGENT STM L664, PT B	1.0	2.1	111.6 25.5
STA. SET= 99 CAT= IN POUR FOAM "TRIMMINGS"	5.7	12.5	68.0 150.0
POLYURETHANE			.0 .0

TABLE 12 (CONT.)

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994 PAGE 19

NOTES FOR ALL SETS

TABLE 12 (CONT.)
SUMMARY BY CATEGORY

HAZARDOUS WASTE GENERATION FOR EACH YEAR 1988-1994

PAGE 20

CATEGORY	BASELINE MONTHLY			BASELINE YEARLY			CONTINGENCY PER YEAR		
	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS	POUNDS	KILOGRAMS
SO	10326.8	22776.9	123921.9	273202.5	0	0	0	0	0
EW	16891.4	37239.3	202696.2	446871.0	0	0	0	0	0
FO	47.6	105.0	571.5	1260.0	0	0	0	0	0
FS	5071.7	11181.3	60850.4	134175.0	0	0	0	0	0
OS	1540.7	3396.8	19486.8	40761.0	0	0	0	0	0
HF	503.2	1109.4	6038.4	13312.5	0	0	0	0	0
AW	36.0	79.4	432.0	952.5	0	0	0	0	0
CN	3500.9	7718.1	42010.4	92617.5	0	0	0	0	0
CR	48.2	105.3	578.3	1275.0	0	0	0	0	0
HS	4848.9	10690.0	59166.5	128286.0	0	0	0	0	0
HY	533.4	1176.0	6401.1	14112.0	44930.6	99055.5	0	0	0
IM	1474.5	3250.8	17694.1	39009.0	0	0	0	0	0
MH	584.6	1288.9	7014.8	15465.0	6464.6	14252.0	0	0	0
NH	45.4	100.0	544.3	1200.0	47.2	104.0	0	0	0
NO	546.0	1203.6	6551.4	14443.5	65050.2	143412.0	0	0	0
PA	102.6	226.3	1231.5	2715.0	0	0	0	0	0
SN	1910.5	4211.9	22925.6	50542.5	0	0	0	0	0
WP	5.7	12.5	68.0	150.0	0	0	0	0	0
PS	0	0	0	0	504379.8	1111973.0	0	0	0
QW	709869.3	1565000.0	8519420.0	18780000.0	0	0	0	0	0
AL	0	0	0	0	0	0	0	0	0
CA	62.4	137.5	748.4	1650.0	0	0	0	0	0
PW	189.4	417.5	2272.5	5010.0	0	0	0	0	0
BA	92.5	204.0	1110.4	2448.0	0	0	0	0	0
CB	136.1	300.0	1632.9	3600.0	0	0	0	0	0
CS	18143.6	40000.0	217723.2	480000.0	0	0	0	0	0
CW	0	0	0	0	0	0	0	0	0
IW	231614.4	510625.0	2779372.5	6127500.0	0	0	0	0	0
PR	0	0	0	0	0	0	0	0	0
SB	264624.4	583400.0	3175492.5	7000800.0	0	0	0	0	0
SI	27215.4	60000.0	326584.8	720000.0	0	0	0	0	0
SR	.7	1.5	8.2	18.0	0	0	0	0	0

* For footnotes, see Table 8.

TABLE 13. HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT *

PAGE 1

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE)	BASELINE FOR PROJECT POUNDS	KILOGRAMS	CONTINGENCY FOR PROJECT POUNDS	KILOGRAMS
STA. SET= 0 ⁽²⁾ CAT= SO CONTAMINATED FREON	2475.8 ⁽³⁾	5458.3 ⁽³⁾	297101.4 ⁽³⁾	655000.0 ⁽³⁾	.0
SUBTOTAL FOR SET 0	2475.8	5458.3	297101.4	655000.0	.0
STA. SET= 17 CAT= EW WASTEWATER FROM EENCS	2838.9 ⁽⁴⁾	6258.6 ⁽⁴⁾	340668.8 ⁽⁴⁾	751050.0 ⁽⁴⁾	.0
STA. SET= 17 CAT= FO DIESEL FUEL	.0	.0	.0	.0	.0
STA. SET= 17 CAT= FO DIESEL FUEL & OIL	.0	.0	.0	.0	.0
STA. SET= 17 CAT= FS CONTAMINATED DILUTION WATER MMH	.0	.0	.0	.0	.0
STA. SET= 17 CAT= OS CONTAMINATED DILUTION WATER H204	.0	.0	.0	.0	.0
SUBTOTAL FOR SET 17	2838.9	6258.6	340668.8	751050.0	.0
STA. SET= 18 CAT= HF HYDRAULIC FLUIDS	4.5 ⁽⁵⁾	9.9 ⁽⁵⁾	538.6 ⁽⁵⁾	1187.5 ⁽⁵⁾	.0
SUBTOTAL FOR SET 18	4.5	9.9	538.6	1187.5	.0
STA. SET= 19 CAT= AM TPS ADHESIVE, RTV 366/577 PHENYL METHYL POLYSILOXANE TIN OXIDE IRON OXIDE SILICON HARDENER	1.2	2.6	141.7	312.5	.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 2

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	KILOGRAMS	CONTINGENCY FOR PROJECT POUNDS
EPOXY				
ZINC CHROMATE				
ASBESTOS				
MERCAPTAN				
DIMETHYLAMINE				
STA.SET= 19 CAT= AW				
EA 9309 EPOXY	.0	.0	.0	.0
EPOXY RESIN				
GLASS FIBERS				
ACRYLONITRILE/BUTADIEN/STYRENE				
ASBESTOS				
POLYGLYCOL DIAMINE				
SILANE				
STA.SET= 19 CAT= CN				
SPRAYCANS OF TPS SEALER				
FLUORINATED SOLVENT				
FREON 113				
STA.SET= 19 CAT= CN				
KOROPON PRIMER CONTAM CANS	7.1 ⁽⁶⁾	15.6 ⁽⁶⁾	850.5 ⁽⁶⁾	1875.0 ⁽⁶⁾
BUTYL ACETATE				
METHYL ETHYL KETONE				
TOLUENE				
TALC - Mg SILICATES				
EPOXY RESIN				
STA.SET= 19 CAT= CN				
LACQUER SPRAY CANS	2.8 ⁽⁷⁾	6.3 ⁽⁷⁾	340.2 ⁽⁷⁾	750.0 ⁽⁷⁾
PIGMENT SOLIDS				
VEHICLE SOLIDS				
TOLUENE				
XYLENE				
HYDROCARBON PROPELLANT				
PETROLEUM DISTILLATES				
STA.SET= 19 CAT= CN				
ISP CONTAM CUPS & WOOD STICKS	.7 ⁽⁸⁾	1.6 ⁽⁸⁾	85.0 ⁽⁸⁾	187.5 ⁽⁸⁾
INSTANT SET POLYMER				
STA.SET= 19 CAT= CN				
MARSHALL STENCIL INK SPRAYCANS	.3 ⁽⁷⁾	.6 ⁽⁷⁾	34.0 ⁽⁷⁾	75.0 ⁽⁷⁾
XYLENE (CONT.)				.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT PAGE 3

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS	CONTINGENCY FOR PROJECT POUNDS
NAPTHA OTHER MATERIALS				
STA. SET= 19 CAT= CN LACQUER SPRAYCANS	2.3 ⁽⁷⁾	5.0 ⁽⁷⁾	272.2 ⁽⁷⁾	600.0 ⁽⁷⁾
PIGMENT SOLIDS				.0
VEHICLE SOLIDS				.0
TOLUENE				.0
XYLENE				.0
HYDROCARBON PROPELLANT				.0
PETROLEUM DISTILLATES				.0
STA. SET= 19 CAT= CN ENAMEL SPRAYCANS	4.3 ⁽⁷⁾	9.4 ⁽⁷⁾	510.3 ⁽⁷⁾	1125.0 ⁽⁷⁾
EA 911 EPOXY				.0
EA 934 EPOXY				.0
EA 9309 EPOXY				.0
STA. SET= 19 CAT= CN CONTAMINATED TARE CUPS	4.3 ⁽⁷⁾	9.4 ⁽⁷⁾	510.3 ⁽⁷⁾	1125.0 ⁽⁷⁾
STA. SET= 19 CAT= CR RAGS WITH SOLVENTS, GREASES	4.7 ⁽⁹⁾	10.4 ⁽⁹⁾	567.6 ⁽⁹⁾	1250.0 ⁽⁹⁾
STA. SET= 19 CAT= CR SOLVENT-CONTAM CHEESECLOTH				.0
ISOPROPYL ALCOHOL				.0
METHYL ETHYL KETONE				.0
1,1,1-TRICHLOROETHANE				.0
STA. SET= 19 CAT= CR MEK & IPA CONTAM CHEESECLOTH				.0
METHYL ETHYL KETONE				.0
ISOPROPYL ALCOHOL				.0
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH				.0
ISOPROPYL ALCOHOL				.0
STA. SET= 19 CAT= CR TCE CONTAMINATED CHEESECLOTH				.0
1,1,1-TRICHLOROETHANE				.0
STA. SET= 19 CAT= CR MEK CONTAMINATED CHEESECLOTH				.0
METHYL ETHYL KETONE				.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 4

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE)	BASELINE FOR PROJECT KILOGRAMS POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL	.0	.0	
STA. SET= 19 CAT= CR SOLID FILM LUBRIC CONT CHSCLTH	.0	.0	
STA. SET= 19 CAT= CR IPA CONTAMINATED CHEESECLOTH ISOPROPYL ALCOHOL	.0	.0	
STA. SET= 19 CAT= CR DICHLOROMETHANE CONT CHSECLTH	.0	.0	
STA. SET= 19 CAT= CR CONTAM CLOTHES, CLOTH & DEBRIS KOROPON BASE PRIMER KOROPON ACTIVATOR BERYLLIUM DUST	4.7 (10)	10.4 (10)	567.0 (10) 1250.0 (10)
STA. SET= 19 CAT= EW WASTEWATER FROM EEWAS	3154.3 (4)	6954.2 (4)	378520.8 (4) 834500.0 (4)
STA. SET= 19 CAT= FS WASTEWATER FROM PAYLOAD/DRB MMH	567.0 56.7	1250.0 125.0	68038.5 6803.8 150000.0 15000.0
STA. SET= 19 CAT= FS WASTE FUEL AND PRIMOL 355 HYDRAZINE & MMH	37.8 1.9	83.3 4.2	4535.9 226.8 10000.0 500.0
STA. SET= 19 CAT= HF VACUUM PUMP OIL TEXACO REGAL OIL 068	4.7	10.4	567.0 1250.0
STA. SET= 19 CAT= HS FUEL SCRUBBER HYDRAZINE & MMH	2645.9 52.9	5833.3 116.7	317513.0 6350.3 700000.0 14000.0
STA. SET= 19 CAT= HY HYDRAZINE	.0	.0	.0 24947.4 (12) 55000.0 (12)
STA. SET= 19 CAT= HY HYDRAZINE	70.9	156.3	8504.8 18750.0 340.2 (12) 750.0 (12)
STA. SET= 19 CAT= IN POLYURETHANE FOAM	4.7	10.4	567.0 1250.0 .0 .0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 5

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS KILOGRAMS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS			
STA. SET= 19 CAT= IN ALUMCAST A/B MIXTURE POLYOXYPROPYLENE PENTAERYTHRITOL AROMATIC WHITE OIL INERT ALUMINIZED PARTICLES DIPHENYLMETHANE DIISOCYANATE POLYMERS OF DPM DIISOCYANATE	.1	.3	17.0	37.5	.0	.0
STA. SET= 19 CAT= IN INSTANT SET POLYMER SCRAPS DIPHENYL METHANE DIISOCYANATE POLYOXYALKYLENE>POLYETHER AROMATIC HYDROCARBONS	1.9 ⁽¹³⁾	4.2 ⁽¹³⁾	226.8 ⁽¹³⁾	500.0 ⁽¹³⁾	.0	.0
STA. SET= 19 CAT= IN SILANE/ACETIC ACID RESIDUE METHYL TRIMETHOXYSILANE ACETIC ACID	.5	1.0	56.7	125.0	.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	36.9	81.3	4422.5	9750.0	.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE	9.4	20.8	1134.0	2500.0	.0	.0
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	19.6 ⁽¹⁵⁾	43. ⁽¹⁵⁾	2347.3 ⁽¹⁵⁾	5175.0 ⁽¹⁵⁾	1072.7 ⁽¹²⁾	2363.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	19. ⁽¹⁵⁾	43. ⁽¹⁵⁾	2347.3 ⁽¹⁵⁾	5175.0 ⁽¹⁵⁾	1483.2 ⁽¹²⁾	3270.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	13.9 ⁽¹⁵⁾	30.6 ⁽¹⁵⁾	1666.9 ⁽¹⁵⁾	3675.0 ⁽¹⁵⁾	1828.0 ⁽¹²⁾	4030.0 ⁽¹²⁾
STA. SET= 19 CAT= MH MONOMETHYL HYDRAZINE ⁽¹⁴⁾	43. ⁽¹⁵⁾	95.6 ⁽¹⁵⁾	5204.9 ⁽¹⁵⁾	11475.0 ⁽¹⁵⁾	.0	.0
STA. SET= 19 CAT= NH WASTEWATER WITH AMMONIA	37.8 ⁽¹⁵⁾	83.3 ⁽¹⁵⁾	4335.9 ⁽¹⁵⁾	10000.0 ⁽¹⁵⁾	.0	.0
STA. SET= 19 CAT= ND NITROGEN TETROXIDE	5.7	12.5	680.4	1500.0	.0	.0
STA. SET= 19 CAT= ND NITROGEN TETROXIDE	10.2	22.5	1224.7	2700.0	.0	.0
STA. SET= 19 CAT= ND NITROGEN TETROXIDE	35.7 ⁽¹⁵⁾	78.8 ⁽¹⁵⁾	4286.4 ⁽¹⁵⁾	9450.0 ⁽¹⁵⁾	1630.7 ⁽¹²⁾	3595.0 ⁽¹²⁾

TABLE 13 <CONT. >

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 6

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	KILOGRAMS	POUNDS	CONTINGENCY FOR PROJECT POUNDS
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	35.7 ⁽¹⁵⁾	78.8 ⁽¹⁵⁾	4286.4 ⁽¹⁵⁾	9450.0 ⁽¹⁵⁾	2329.2 ⁽¹²⁾
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	24.9 ⁽¹⁵⁾	54.8 ⁽¹⁵⁾	2982.4 ⁽¹⁵⁾	6575.0 ⁽¹⁵⁾	2862.2 ⁽¹²⁾
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	82.8 ⁽¹⁵⁾	182.5 ⁽¹⁵⁾	9933.6 ⁽¹⁵⁾	21900.0 ⁽¹⁵⁾	.0
STA.SET= 19 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	.0
STA.SET= 19 CAT= OS DECONTAMINATE FROM PAYLOAD/ORB H204	302.4	666.7	36287.2	80000.0	40823.1 ⁽¹²⁾
	2.8	6.3	340.2	750.0	90000.0 ⁽¹²⁾
STA.SET= 19 CAT= OS WASTE OXIDIZER AND PRIMOL 355 N204	38.7	85.4	4649.3	10250.0	.0
STA.SET= 19 CAT= PA KOROPON PRIMER CONT PNT BRUSHES BUTYL ACETATE TALC - Mg SILICATES EPOXY RESIN	18.9 ⁽¹⁶⁾	41.7 ⁽¹⁶⁾	2267.9 ⁽¹⁶⁾	5000.0 ⁽¹⁶⁾	.0
STA.SET= 19 CAT= PA LACQUER #626486	.6 ⁽¹⁷⁾	1.4 ⁽¹⁷⁾	73.7 ⁽¹⁷⁾	162.5 ⁽¹⁷⁾	.0
STA.SET= 19 CAT= PA CONTAMINATED BRUSHES ORGANIC ZINC PRIMER ZINC CHROMATE PRIMER	1.9 ⁽¹⁶⁾	4.2 ⁽¹⁶⁾	226.8 ⁽¹⁶⁾	500.0 ⁽¹⁶⁾	.0
STA.SET= 19 CAT= PA ORGANIC ZINC PRIMER ZINC DUST BARYTES MOLYBDATE ORANGE SILICA HIGH MOLECULAR WEIGHT EPOXY CELLOSOLVE ACETATE TOLUENE METHYL ETHYL KETONE	5.9 ⁽¹⁸⁾	13.0 ⁽¹⁸⁾	708.7 ⁽¹⁸⁾	1562.5 ⁽¹⁸⁾	.0
STA.SET= 19 CAT= PA CONTAMINATED PAINT BRUSHES EA 911 EPOXY (CONT.)	1.9 ⁽¹⁶⁾	4.2 ⁽¹⁶⁾	226.8 ⁽¹⁶⁾	500.0 ⁽¹⁶⁾	.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT PAGE 7

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	KILOGRAMS	POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
EA 934 EPOXY EA 9309 EPOXY					
STA. SET= 19 CAT= SO DOPE & LACQUER THINNER	.9	1.9	.3	102.1	225.0
ALIPHATIC NAPHTHA	.1	.8	17.0	37.5	
ESTER OR KETONE	.4	.8	45.4	100.0	
ISO- OR n-BUTYL ACETATE	.2	.5	28.3	62.5	
ISO- OR n-BUTYL ALCOHOL	.1	.2	11.3	25.0	
STA. SET= 19 CAT= SW WASTEWATER WITH MEK	44.2	97.4	5301.3	11687.5	
METHYL ETHYL KETONE	6.4	14.1	765.4	1687.5	
SUBTOTAL FOR SET 19	7311.0	16118.1	877322.4	1934175.0	77316.7
STA. SET= 21 CAT= EW WASTEWATER FR. EEW&S	2838.9	6258.8	340668.8	751050.0	(4)
STA. SET= 21 CAT= FS WASTEWATER WITH MMH	112.5	247.9	13494.3	29750.0	.0
MMH	10.4	22.9	1247.4	2750.0	
STA. SET= 21 CAT= HS FUEL SCRUBBER	378.0	833.3	45359.0	100000.0	.0
MMH	6.9	15.2	827.8	1825.0	
STA. SET= 21 CAT= IN TILE REPAIR FOAM	4.7	10.4	567.0	1250.0	.0
POLYURETHANE	4.7	10.4	567.0	1250.0	
STA. SET= 21 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0	.0	
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	2041154.8 (19) 4500000.0 (19)
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	15.6	34.4	1871.1	4125.0	.0
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	53.4	117.7	6407.0	14125.0	.0
STA. SET= 21 CAT= NO NITROGEN TETOXIDE	.0	.0	.0	.0	48987.7 (20) 108000.0 (20)
STA. SET= 21 CAT= OS WASTEWATER WITH OXIDIZER (CONT.)	75.8	167.1	9094.5	20050.0	.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 8

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	KILOGRAMS	CONTINGENCY FOR PROJECT POUNDS
H2O4	.6	1.3	68.0	150.0
STA. SET= 21 CAT= SW WASTEWATER WITH MEK METHYL ETHYL KETONE	44.1 6.3	97.3 14.0	5295.7 759.8	11675.0 1675.0
STA. SET= 21 CAT= WP WASTE SEALS, FILTERS, ETC.	4.7 ⁽²¹⁾	10.4 ⁽²¹⁾	567.0 ⁽²¹⁾	1250.0 .0
SUBTOTAL FOR SET 21	3527.7	7777.3	423324.2	933275.0
			2090142.5	4608000.0
STA. SET= 23 CAT= EW WASTEWATER FROM EEWAS	3154.3	6954.2	378520.8	834500.0
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. WASTEWATER HYDRAZINE	591.6 29.3	1304.2 64.6	70986.8 3515.3	156500.0 7750.0
STA. SET= 23 CAT= FS HYDRAZINE-CONTAM. CLNUP WATER HYDRAZINE	197.0 2.2	434.4 4.8	23643.4 260.8	52125.0 575.0
STA. SET= 23 CAT= F8 WASTEWATER FROM PPR HYDRAZINE	2365.8	5215.6	283890.6	625875.0
STA. SET= 23, CAT= FS PRIMOL 355 ⁽¹¹⁾ , HYDRAZINE MMH	354.8	782.3	42580.8	93875.0
STA. SET= 23 CAT= HF HYDRAULIC FLUIDS TETRAORTHORESOL PHOSPHATE	410.1 410.1	904.2 904.2	49214.5 49214.5	108500.0 108500.0
STA. SET= 23 CAT= HS HYDRAZINE & MMH SCRUBBER HYDRAZINE MMH	788.6 17.5 13.7	1738.5 38.5 30.2	94630.2 2097.9 1644.3	208625.0 4625.0 3625.0
STA. SET= 23 CAT= HY HYDRAZINE	216.9	476.1	26024.7	57375.0
STA. SET= 23 CAT= HY LBM PROPELLANT PARAHYDRAZINE (CONT.)	.0 .0	.0 .0	.0 .0	396891.3 875000.0 ⁽²²⁾

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 9

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS POUNDS	BASELINE FOR PROJECT KILOGRAMS POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
UNSYM DIMETHYLHYDRAZINE	.0	.0	.0
STA. SET= 23 CAT= HY HYDRAZINE	.0	.0	.0
STA. SET= 23 CAT= IN K5NA INSULATION	10.9	24.0	2875.0
BUTYL GLYCIDYL ETHER EPOXY RESINS, UNCURED		1304.1	.0
STA. SET= 23 CAT= MH MONOMETHYL HYDRAZINE	344.4	759.4	41333.4
STA. SET= 23 CAT= MH MONOMETHYL HYDRAZINE	.0	.0	.0
STA. SET= 23 CAT= NH AMMONIA	.0	.0	.0
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	191.0	421.1	22923.3
STA. SET= 23 CAT= NO LBN OXIDIZER	.0	.0	.0
NITROGEN TETROXIDE	.0	.0	.0
STA. SET= 23 CAT= NO NITROGEN TETROXIDE	.0	.0	.0
STA. SET= 23 CAT= OS N2O4 CONTAM. CLEANUP WATER	118.1	260.4	14174.7
NITROGEN TETROXIDE	1.2	2.6	141.7
STA. SET= 23 CAT= OS N2O4 CONTAM. WASTEWATER	394.1	868.8	47286.8
NITROGEN TETROXIDE	29.3	64.6	3515.3
PRIMOL 355(11) N2O4	354.8	782.3	480.8
STA. SET= 23 CAT= PS SRB PROPELLANT SPILL(23)	.0	.0	.0
AMMONIUM PERCHLORATE	.6	.0	.0
ALUMINUM POWDER	.0	.0	.0
PBAN BINDER	.0	.0	.0
HTPB BINDER	.0	.0	.0
IRON OXIDE	.0	.0	.0
STA. SET= 23 CAT= QU			

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT PAGE 10

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT KILOGRAMS	CONTINGENCY FOR PROJECT KILOGRAMS	FOUNDS
ALUMINUM OXIDE	3.5	7.7	419.6	925.0
AMMONIA	.2	.5	28.3	62.5
HYDROCHLORIC ACID	377.5	832.3	45302.3	95875.0
ORGANIC CARBON	3.5	7.8	425.2	937.5
STA. SET= 23 CAT= SO SOLVENT MIXTURE FREON TNC/PF/TF SI.M. TETRACHLOROETHANE	363.6 ⁽²⁵⁾	669.4 ⁽²⁵⁾	36434.6 ⁽²⁵⁾	80325.0 ⁽²⁵⁾
STA. SET= 23 CAT= SO CONTAMINATED SOLVENTS	275.9 ⁽²⁶⁾	608.3 ⁽²⁶⁾	33112.1 ⁽²⁶⁾	73000.0 ⁽²⁶⁾
STA. SET= 23 CAT= SW SOLVENT WASTEWATER UNSPEC.	433.7 ^(18X25)	956.3 ^(18X25)	52049.5 ^(18X25)	114750.0 ^(18X25)
STA. SET= 23 CAT= SW CONTAMINATED WASTEWATER SOLVENTS CHLORINATED RUBBER ZINC PRIMER	985.6 ⁽¹⁸⁾	2172.9 ⁽¹⁸⁾	118273.6 ⁽¹⁸⁾	260750.0 ⁽¹⁸⁾
SUBTOTAL FOR SET 23	603048.3	1329500.8	72365792.0	159540096.0
			1022292.0	2253780.0
STA. SET= 31 CAT= AL SURFACTANT NaOH				.0
SODIUM TRIPOLYPHOSPHATE				
STA. SET= 31 CAT= AW EA 934 EPOXY ADHESIVE EPOXY RESIN ASBESTOS FILLERS POLYAMIDE DIETHYLENetriAMINE	16.5 ⁽²⁶⁾⁽²⁷⁾	36.5 ⁽²⁶⁾⁽²⁷⁾	1984.5 ⁽²⁶⁾⁽²⁷⁾	4375.0 ⁽²⁶⁾⁽²⁷⁾
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS	23.6	52.1	2834.9	6250.0
STA. SET= 31 CAT= CA CHARCOAL FILTER WASTES	23.6	52.1	2834.9	6250.0
STA. SET= 31 CAT= CA CONTAMINATED AIR FILTERS				.0
STA. SET= 31 CAT= CM BOSTIK PRIMER PAINT CANS	7.1 ⁽⁶⁾	15.6 ⁽⁶⁾	850.5 ⁽⁶⁾	1875.0 ⁽⁶⁾

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 11

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	KILOGRAMS	POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS	POUNDS
STA. SET= 31 CAT= CN BOSTIK TOPCOAT PAINT CANS	21. ⁽⁶⁾ .3	46. ⁽⁶⁾ .9	2551. ⁽⁶⁾ 4	5625. ⁽⁶⁾ 0	.0	.0
STA. SET= 31 CAT= CN RUSTOLEUM PRIMER PAINT CANS	.9	2. ⁽⁶⁾ 1	113. ⁽⁶⁾ 4	250. ⁽⁶⁾ 0	.0	.0
STA. SET= 31 CAT= CN RUSTOLEUM TOPCOAT PAINT CANS	.9	2. ⁽⁶⁾ 1	113. ⁽⁶⁾ 4	250. ⁽⁶⁾ 0	.0	.0
STA. SET= 31 CAT= CN MSA-1 EMPTY CONTAINERS	472. ⁽²⁸⁾ 5	1041. ⁽²⁸⁾ 7	56698. ⁽²⁸⁾ 8	125000. ⁽²⁸⁾ 0	.0	.0
STA. SET= 31 CAT= CN K5NA CONTAINERS	3. ⁽⁵⁾	7. ⁽⁸⁾	425. ⁽²⁸⁾ 2	937. ⁽²⁸⁾ 5	.0	.0
STA. SET= 31 CAT= CN K5NA & MTA-2 PACKING MATERIALS	2362. ⁽²⁸⁾ 4	5208. ⁽²⁸⁾ 3	283493. ⁽²⁸⁾ 8	625000. ⁽²⁸⁾ 0	.0	.0
STA. SET= 31 CAT= CR SOLVENT CONTAMINATED RAGS	4. ⁽⁹⁾ 7	10. ⁽⁹⁾ 4	567. ⁽⁹⁾ 0	1250. ⁽⁹⁾ 0	.0	.0
STA. SET= 31 CAT= CR ALDINE CONTAMINATED RAGS	2. ⁽⁹⁾ 4	5. ⁽⁹⁾ 2	283. ⁽⁹⁾ 5	625. ⁽⁹⁾ 0	.0	.0
STA. SET= 31 CAT= CR RYMPLE CLOTHS	4. ⁽⁹⁾ 7	10. ⁽⁹⁾ 4	567. ⁽⁹⁾ 0	1250. ⁽⁹⁾ 0	.0	.0
STA. SET= 31 CAT= CR PAINT DROP CLOTHS	7. ⁽⁹⁾ 1	15. ⁽⁹⁾ 6	850. ⁽⁹⁾ 5	1875. ⁽⁹⁾ 0	.0	.0
STA. SET= 31 CAT= EW WASTEWATER FROM EETS	1261. ⁽⁴⁾ 7	2781. ⁽⁴⁾ 7	151408. ⁽⁴⁾ 3	333800. ⁽⁴⁾ 0		
STA. SET= 31 CAT= FO FUEL AND OIL SPILLS	.0	.0	.0	.0	.0	.0
STA. SET= 31 CAT= FO FUEL & OIL WASTES	39. ⁽⁷⁾	87. ⁽⁷⁾	4762. ⁽⁷⁾	10500. ⁽⁷⁾	.0	.0
STA. SET= 31 CAT= FS PRIMOL 355(11)	.0	.0	.0	.0	.0	.0
STA. SET= 31 CAT= HS SCRUBBER EFFLUENT	39. ⁽¹⁸⁾	86. ⁽¹⁸⁾ 5	4706. ⁽¹⁸⁾ 0	10375. ⁽¹⁸⁾ 0	.0	.0
STA. SET= 31 CAT= HY HYDRAZINE	114. ⁽⁰⁾	251. ⁽⁴⁾	13681. ⁽⁴⁾	30162. ⁽⁵⁾	.0	.0
STA. SET= 31 CAT= IN MSA-1 (CURED) ⁽²⁹⁾	94. ⁽²⁵⁾ 5	208. ⁽²⁵⁾ 3	11339. ⁽²⁵⁾ 8	25000. ⁽²⁵⁾ 0	.0	.0

TABLE 13 <CONT. >

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT PAGE 12

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS	CONTINGENCY FOR PROJECT POUNDS
EPICHLORHYDRIN/BGE GLASS ECOSPHERES PHENOLIC MICROSPHERES GLASS FIBERS BENTONE 27 METHYLENE DIAMINE m-PHENYLENE DIAMINE	37.8 11.2 33.5 4.2 3.2 3.3 1.4	83.4 24.6 73.9 9.2 7.0 7.3 5.0	4541.6 1338.1 4019.9 498.9 379.9 396.9 164.4	10012.5 2950.0 8862.5 1100.0 837.5 875.0 362.5
STA. SET= 31 CAT= IN MSA-1, PART A (UNMIXED) METHYLENE CHLORIDE EPICHLORHYDRIN/BGE		.0		.0
STA. SET= 31 CAT= IN MSA-1, PART B (UNMIXED) METHYLENE CHLORIDE PERCHLOROETHYLENE METHYLENE DIAMINE m-PHENYLENE DIAMINE ETHYL ALCOHOL PHENOLIC MICROSPHERES GLASS ECOSPHERES GLASS FIBERS BENTONE 27		.0		.0
STA. SET= 31 CAT= IN MTA-2 (CURED) ⁽²⁹⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES	47.2 14.6 14.6 5.8 .6 11.7	104.2 32.2 32.2 12.8 1.3 25.7	5669.9 1752.0 1752.0 697.4 68.0 1400.5	12500.0 3862.5 3862.5 1537.5 150.0 3087.5
STA. SET= 31 CAT= IN MTA-2 (UNMIXED) ⁽³⁰⁾ EPICHLORHYDRIN/BGE LP-3, POLYSULFIDE LIQ POLYMER MDA & MPDA STANNOUS OCTOATE PHENOLIC MICROSPHERES METHYLENE CHLORIDE PERCHLOROETHYLENE	14.2 4.4 4.4 1.7 .2 3.5	31.3 9.7 9.7 3.9 .4 7.7	1701.0 527.3 527.3 209.8 22.7 419.6	3750.0 1162.5 1162.5 462.5 50.0 925.0
STA. SET= 31 CAT= IN KSHA BUTYL GLYCIDYL ETHER EPOXY RESINS	7.6	16.7	907.2	2000.0
STA. SET= 31 CAT= IN INSULATION AND PAPER				.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 13

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE)	BASELINE FOR PROJECT KILOGRAMS POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
STA. SET= 31 CAT= PA BOSTIK EPOXY PRIMER EPOXY RESIN	12.6	28.1	1530.9 3375.0 1.7 3.6 198.4 437.5
AMINE CURING AGENT	.3	.6	34.0 75.0
TITANIUM DIOXIDE	.3	.6	34.0 75.0
CHROMATE PIGMENTS	.6	1.3	68.0 150.0
INERT PIGMENTS	1.8	4.0	215.5 475.0
SUSPENSION & FLOW CONTROL ADDI	<.1	.1	5.5 12.5
SOLVENTS	7.7	16.9	918.5 2025.0
STA. SET= 31 CAT= PA BOSTIK EPOXY TOPCOAT EPICHLOROHYDRIN/BISPHENOL A	17.5	38.5	2097.9 4625.0 4.3 9.4 510.3 1125.0
AMINE CURING AGENT	.7	1.5	79.4 175.0
COLOR PIGMENT	3.5	7.8	425.2 937.5
SUSPENSION & FLOW CONTROL ADDI	<.2	.5	28.3 62.5
SOLVENTS PHOTOCHEM REACTIVE	1.7	3.6	198.4 437.5
SOLVENTS NONPHOTOCHEM REACTIVE	7.1	15.6	850.5 1875.0
STA. SET= 31 CAT= PA RUSTOLEUM PRIMER SILICATES	3.8	8.3	453.6 1000.0 .6 1.4 73.7 162.5
YELLOW IRON OXIDE	.3	.6	34.0 75.0
TITANIUM DIOXIDE	.1	.2	11.3 25.0
CALCIUM BOROSILICATE	.7	1.6	85.0 187.5
BENTONITE	<.1	<.1	2.3 5.0
LINSEED PHENOLIC ALKYL RESIN	.8	1.7	90.7 200.0
ALIPHATIC HYDROCARBONS	1.2	2.7	147.4 325.0
DRIERS AND ADDITIVES	.1	.2	11.3 25.0
STA. SET= 31 CAT= PA RUSTOLEUM TOPCOAT SILICATES	3.8	8.3	453.6 1000.0 1.2 2.7 147.4 325.0
TITANIUM DIOXIDE	.7	1.5	79.4 175.0
BENTONITE CLAY	<.1	<.1	2.3 5.0
TINTING COLORS	.1	.2	11.3 25.0
ALKYL RESIN	.7	1.5	79.4 175.0
ALIPHATIC HYDROCARBONS	1.1	2.5	136.1 300.0
DRIERS & ADDITIVES	<.1	.1	5.7 12.5
STA. SET= 31 CAT= PA GACOFLEX	18.4	40.6	2211.3 4875.0 1.3 2.8 153.1 337.5
TITANIUM DIOXIDE	1.5	3.2	75.8 387.5
CLAY	1.8	4.1	221.1 487.5
HYFALON	.4	.8	45.4 100.0
HYDROCARBON RESIN	8.6	19.1	1037.6 2287.5
PERCHLOROETHYLENE			
1,1,1-TRICHLOROETHANE	4.6	10.2	555.6 1225.0
(CONT.)			

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 14

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS	CONTINGENCY FOR PROJECT POUNDS
----------------	--------------------------------------	-----------------------------	-----------------------------------	--------------------------------

EPONIXIDIZED SOYBEAN OIL	.2	.4	22.7	50.0
STA. SET= 31 CAT= PA PAINT-SPILL ABSORBANT	.0	.0	.0	.0
STA. SET= 31 CAT= PW ALODINE CONTAMINATED WASTEWATER	157.8 (18) 2.8 (31)	347.9 (18) 6.1 (31)	18937.4 (18) 334.5 (31)	41750.0 (18) 737.5 (31)
CHROMIC ACID	1.6	3.4	187.1	412.5
FERRICYANIDE SALT	<.1	.1	5.7	12.5
COMPLEX FLUORIDE SALT				
STA. SET= 31 CAT= S0 PERCHLOROETHYLENE	.7	1.5	79.4	175.0
STA. SET= 31 CAT= S0 TRICHLOROETHANE	.5	1.1	62.4	137.5
STA. SET= 31 CAT= S0 FREON 113	.6	1.4	73.7	162.5
STA. SET= 31 CAT= S0 MSA-1 CONTAMINATED MECI	1568.2	3457.3	189183.2	414875.0
STA. SET= 31 CAT= S0 MSA-1 CONTAM PERCHLOROETHYLENE	1929.2	4253.1	231501.0	510375.0
STA. SET= 31 CAT= S0 PERCHLOROETHYLENE	289.2	637.5	34699.6	76500.0
STA. SET= 31 CAT= S0 TRICHLOROETHANE	85.0	187.5	10205.8	22500.0
STA. SET= 31 CAT= S0 METHYLENE CHLORIDE	266.5	587.5	31978.1	70500.0
STA. SET= 31 CAT= S0 MTA-2 CONTAMINATED SOLVENTS	551.9 (26)	1216.7 (26)	66224.1 (26)	146000.0 (26)
STA. SET= 31 CAT= S0 BOSTIK CONTAMINATED SOLVENTS	275.9 (26)	608.3 (26)	33112.1 (26)	73000.0 (26)
STA. SET= 31 CAT= S0 RUSTOLEUM CONTAMINATED SOLVENT	275.9 (26)	608.3 (26)	33112.1 (26)	73000.0 (26)
SUBTOTAL FOR SET 31	10027.2	22106.3	1203260.8	2652750.0
STA. SET= 32 CAT= BR LITHIUM STORAGE BATTERIES	25.5	56.3	3061.7	6750.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 15

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS POUNDS	BASELINE FOR PROJECT KILOGRAMS POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
STA. SET= 32 CAT= BA SILVER-ZINC STORAGE BATTERIES	42.5	93.8	5102.9 11250.0 .0 .0
STA. SET= 32 CAT= BA POTASSIUM HYDROXIDE SOLUTION	9.1 ⁽¹⁸⁾	20.0 ⁽¹⁸⁾	1082.6 ⁽¹⁸⁾ 2400.0 ⁽¹⁸⁾ .0 .0
STA. SET= 32 CAT= CB HYDRAZINE-CONTAMINATED WATER	113.4 ⁽¹⁸⁾	250.0 ⁽¹⁸⁾	13607.7 ⁽¹⁸⁾ 30000.0 ⁽¹⁸⁾ .0 .0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER ⁽³²⁾	.0	.0	.0 .0
STA. SET= 32 CAT= CS CONTAMINATED SEAWATER ⁽³²⁾	15119.7	33333.3	1814360.0 4000000.0 .0 .0
STA. SET= 32 CAT= CW SRB FWD SKT CLEANING WASTES			.0 .0
STA. SET= 32 CAT= EW WASTEWATER FROM EEW ⁽⁴⁾	630.9 ⁽⁴⁾	1390.8 ⁽⁴⁾	75704.2 ⁽⁴⁾ 166900.0 ⁽⁴⁾ .0 .0
STA. SET= 32 CAT= FO BILGE WASTES	.0	.0	.0 .0
STA. SET= 32 CAT= FO DIESEL FUEL & OIL SPILLS	.0	.0	.0 .0
STA. SET= 32 CAT= FS WASTE FUEL & PRIMOL 355 ⁽¹¹⁾	.0	.0	.0 .0
STA. SET= 32 CAT= HS HYDRAZINE SCRUBBER EFFLUENT HYDRAZINE	189.0 ⁽¹⁸⁾ 1.7	416.7 ⁽¹⁸⁾ 3.8	22679.5 ⁽¹⁸⁾ 50000.0 ⁽¹⁸⁾ .0 .0
STA. SET= 32 CAT= HY HYDRAZINE	42.8	94.3	5131.2 11312.5 .0 .0
STA. SET= 32 CAT= IN INSULATION WASTES, SOLID ⁽³³⁾ MSA-1 INSULATION HTA-2 INSULATION K5HA INSULATION PR-855 INSULATION	756.0 ⁽³⁴⁾	1666.7 ⁽³⁴⁾	90718.0 ⁽³⁴⁾ 200000.0 ⁽³⁴⁾ .0 .0
STA. SET= 32 CAT= IN INSULATION CONTAM FILTERS	4.7 ⁽²¹⁾	10.4 ⁽²¹⁾	567.0 ⁽²¹⁾ 1250.0 ⁽²¹⁾ .0 .0
STA. SET= 32 CAT= IV CONTAMINATED WATER ⁽³³⁾ CONTAMINATED WATER ⁽³³⁾	193012.0 ⁽¹⁸⁾	425520.9 ⁽¹⁸⁾	23161440.0 ⁽¹⁸⁾ 51062504.0 ⁽¹⁸⁾ .0 .0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 16

WASTE MATERIAL BASELINE MONTHLY (AVERAGE) BASELINE FOR PROJECT CONTINGENCY FOR PROJECT
KILOGRAMS POUNDS KILOGRAMS POUNDS POUNDS

MSA-1 INSULATION				
MTA-2 INSULATION				
K5HA INSULATION				
PR-855 INSULATION				
STA. SET= 32 CAT= PR PRESERVATIVE CHEMICALS PROTECTIVE LUBRICANTS				
STA. SET= 32 CAT= PS SRB SOLID PROPELLANT	.0	.0	.0	.0
AMMONIUM PERCHLORATE	.0	.0	.0	.0
ALUMINUM POWDER	.0	.0	.0	.0
FERRIC OXIDE	.0	.0	.0	.0
POLYMER & EPOXY RESIN	.0	.0	.0	.0
STA. SET= 32 CAT= SB DETERGENT WASHWATER (35)	36287.2	80000.0	4354464.0	9600000.0
STA. SET= 32 CAT= SB POTABLE RINSE WATER	125493.2	276666.6	15059188.0	33200000.0
STA. SET= 32 CAT= SB DEIONIZED RINSE WATER	58739.9	129500.0	7048788.0	15540000.0
STA. SET= 32 CAT= SI SRB RINSE WATER	22679.5	50000.0	2721540.0	6000000.0
STA. SET= 32 CAT= SO SOLVENTS FREON TMC/TN SOLVENTS, UNSPECIFIED	111.1 ⁽²⁶⁾	24.4 ⁽²⁶⁾	1326.8 ⁽²⁶⁾	2925.0 ⁽²⁶⁾
SUBTOTAL FOR SET 32	453156.4	999044.3	54378768.0	119885296.0
158				
STA. SET= 33 CAT= CA AIR FILTERS	4.7 ⁽²¹⁾	10.4 ⁽²¹⁾	567.0 ⁽²¹⁾	1250.0 ⁽²¹⁾
STA. SET= 33 CAT= EW WASTEWATER FROM EEE&S	197.0	434.4	23643.4	52125.0
STA. SET= 33 CAT= HF HYDRAULIC FLUIDS				.0
SUBTOTAL FOR SET 33	201.8	444.8	24210.4	53375.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

PAGE 17

WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS	CONTINGENCY POUNDS
STA. SET= 99 CAT= AW GX-6300 ABLATOR ADHESIVE	6.1	13.5	737.1	1625.0
RESIN STM L 663	.6	1.4	73.7	162.5
RESIN STM L 664	2.3	5.0	272.2	600.0
SILICA POWDER	.2	.4	22.7	50.0
CARBON POWDER	.2	.4	22.7	30.0
CURING AGENT L 663	.2	.5	28.3	62.5
CURING AGENT L 664	<.1	.1	5.7	12.5
HEPTANE	2.5	5.4	294.8	650.0
XYLENE	.1	.3	17.0	37.5
STA. SET= 99 CAT= AW ISOCHEN POLYESTER RESIN ADHESIVE	6.1	13.5	737.1	1625.0
STYRENE				.0
MEK PEROXIDE CATALYST				.0
DIMETHYL PHthalate SOLVENTS(36)	2.4 ⁽²⁸⁾	5.2 ⁽²⁸⁾	283.5 ⁽²⁸⁾	625.0 ⁽²⁸⁾
STA. SET= 99 CAT= CA FILTER				.0
STA. SET= 99 CAT= CN SOLVENT CONTAMINATED CONTAINER	2.4 ⁽²⁸⁾	5.2 ⁽²⁸⁾	283.5 ⁽²⁸⁾	625.0 ⁽²⁸⁾
STA. SET= 99 CAT= CH PRIMER CONTAMINATED CONTAINERS	.3 ⁽²⁸⁾	.7 ⁽²⁸⁾	39.7 ⁽²⁸⁾	87.5 ⁽²⁸⁾
STA. SET= 99 CAT= CN ADHESIVE CONTAMINATED CONTAINR	.3 ⁽²⁸⁾	.7 ⁽²⁸⁾	39.7 ⁽²⁸⁾	87.5 ⁽²⁸⁾
STA. SET= 99 CAT= CN SOLVENT CONTAINERS				.0
STA. SET= 99 CAT= CN POUR FOAM CONTAINERS	23.6 ⁽²⁸⁾	52.1 ⁽²⁸⁾	2834.9 ⁽²⁸⁾	6250.0 ⁽²⁸⁾
STA. SET= 99 CAT= CN ABLATOR CONTAMINATED CONTAINER	.3 ⁽²⁸⁾	.7 ⁽²⁸⁾	39.7 ⁽²⁸⁾	87.5 ⁽²⁸⁾
STA. SET= 99 CAT= CR SOLVENT CONTAMINATED RAGS	4.7 ⁽⁹⁾	10.4 ⁽⁹⁾	567.0 ⁽⁹⁾	1250.0 ⁽⁹⁾
STA. SET= 99 CAT= CR ADHESIVE CONTAMINATED RAGS	4.7 ⁽⁹⁾	10.4 ⁽⁹⁾	567.0 ⁽⁹⁾	1250.0 ⁽⁹⁾
STA. SET= 99 CAT= CR EPOXY PRIMER-CONTAMINATED RAGS	2.4 ⁽⁹⁾	5.2 ⁽⁹⁾	283.5 ⁽⁹⁾	625.0 ⁽⁹⁾
STA. SET= 99 CAT= IN BX-250 FOAM (SOFT) (CONT.)	122.8	270.8	14741.7	32500.0

TABLE 13 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

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WASTE MATERIAL	BASELINE MONTHLY (AVERAGE) KILOGRAMS	BASELINE FOR PROJECT POUNDS	KILOGRAMS	POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS	POUNDS
DIPHENYL METHANE DIISOCYANATE	30.7	67.7	3685.4	8125.0		
FREON 11	19.8	43.8	2381.3	5250.0		
AMINES	10.9	24.0	1304.1	2875.0		
POLYOLs						
SUPER MEK PEROXIDE						
POLYESTER RESIN						
DIMETHYL PHTHALATE						
STA. SET= 99 CAT= IN POUR FOAM (MIXED) (29) POLYURETHANE	129.9 ⁽³⁷⁾	286.5 ⁽³⁷⁾	15592.2 ⁽³⁷⁾	34375.0 ⁽³⁷⁾	.0	.0
STA. SET= 99 CAT= IN POUR FOAM PART A (UNMIXED) (30) DIPHENYL METHANE DIISOCYANATE	6.6	14.6	793.8	1750.0	.0	.0
FREON 11	3.3	7.3	396.9	875.0		
POLYOLs, AMINES	2.1	4.7	255.1	562.5		
1.2	2.6	141.7	312.5			
STA. SET= 99 CAT= IN POUR FOAM PART B (UNMIXED) (30) FREON 11	6.6	14.6	793.8	1750.0	.0	.0
AMINE CATALYST	1.3	2.9	158.8	350.0		
POLYETHER POLYOL BLEND	.1	.3	17.0	37.5		
5.2	11.4	618.0	1362.5			
STA. SET= 99 CAT= IN POUR FOAM CONTAMINATED PAPER	1.6 ⁽²⁸⁾	3.4 ⁽²⁸⁾	187.1 ⁽²⁸⁾	412.5 ⁽²⁸⁾	.0	.0
STA. SET= 99 CAT= IN SUPER LIGHT ABLATOR (1)	4.7	10.4	567.0	1250.0	.0	.0
RESIN STM L664, PT A	2.8	6.1	334.5	737.5		
SILICA FIBERS	.3	.6	34.0	75.0		
CORK	.6	1.3	68.0	150.0		
PHENOLIC MICROSPHERES	.1	.3	17.0	37.5		
SILICA MICROSPHERES	.7	1.5	79.4	175.0		
CURING AGENT	.3	.6	34.0	75.0		
STA. SET= 99 CAT= IN SUPER LIGHT ABLATOR (1)	4.7	10.4	567.0	1250.0	.0	.0
RESIN STM L664, PT A	1.4	3.1	170.1	375.0		
CARBON POWDER						
SILICA FIBERS						
SILICA MICROSPHERES						
PHENOLIC MICROSPHERES						
CURING AGENT STM L664, PT B	.8	1.8	96.4	212.5		
CORK						
SILICA MICROSPHERES						
PHENOLIC MICROSPHERES						
CURING AGENT STM L664, PT B						
STA. SET= 99 CAT= IN POUR FOAM "TRIMMINGS" POLYURETHANE	4.7	10.4	567.0	1250.0	.0	.0

TABLE I 3 (CONT.)

HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT

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WASTE MATERIAL

BASELINE MONTHLY (AVERAGE) BASELINE FOR PROJECT
KILOGRAMS POUNDS

		CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
STA. SET= 99	CAT= PA	
EPOXY PRIMER	<.1	(27)
METHYLENE ISOBUTYL KETONE	.1	
XYLENE		
CYCLOHEXANONE		
CHROMATES		
INORGANIC PIGMENTS		
N-BUTANOL		
TOLUENE		
AMINO SILANE		
METHYL ETHYL KETONE		
STA. SET= 99	CAT= PA	
D.C. 1200	<.1	(27)
VM AND P NAPHTHA		
ORGANOMETALLIC SALTS		
STA. SET= 99	CAT= SO	
FREON TMC	.1	(27)
STA. SET= 99	CAT= SO	
1,1,1-TRICHLOROETHANE	.1	(27)
STA. SET= 99	CAT= SO	
MEK & CELLOSOLVE	12.7	28.0
STA. SET= 99	CAT= SO	
HEPTANE	78.2	172.4
STA. SET= 99	CAT= SO	
CELLOSOLVE ACETATE	111.5	245.8
STA. SET= 99	CAT= SO	
METHYL ETHYL KETONE	92.1	203.0
STA. SET= 99	CAT= SR	
SOLVENT REDUCER	.6	1.3
METHYL ETHYL KETONE	.4	.8
CYCLOHEXANONE	.4	.4
STA. SET= 99	CAT= SW	
SOLVENT CONTAMINATED WATER	84.4	186.0
SUBTOTAL FOR SET 99		712.7
TOTAL FOR ALL SETS		1627304.3
		2388289.5
		129996512.0
		286594752.0
		3189751.5
		7032235.0

TABLE 13 (CONT.) HAZARDOUS WASTE GENERATION FOR TOTAL PROJECT SUMMARY BY CATEGORY

CATEGORY	BASELINE MONTHLY (AVERAGE) KILOGRAMS POUNDS	BASELINE FOR PROJECT KILOGRAMS POUNDS	CONTINGENCY FOR PROJECT KILOGRAMS POUNDS
SG	8605.7	18972.4	1032682.6
EW	15,076.1	31,032.7	16,891,35.0
FO	39.7	87.5	47,62.7
FS	4226.4	9317.7	50,7170.3
DS	1283.9	2830.6	15,4073.2
HF	419.3	924.5	50,320.1
AW	30.0	66.1	3600.4
CH	2317.4	6431.8	350086.4
CR	40.2	88.5	4819.4
HS	4040.7	8908.3	484887.7
HY	444.5	980.0	53342.2
JN	1228.8	2709.0	147450.8
MH	487.1	1074.0	58456.4
NH	37.8	83.3	4535.9
NO	455.0	1003.0	54595.2
PA	85.5	188.5	10262.5
SW	1592.1	3509.9	191046.4
WP	4.7	10.4	567.0
PS	0	0	1250.0
QW	591556.9	1304166.5	70996832.0
AL	0	0	0
CA	52.0	114.6	6236.9
PW	157.8	347.9	18937.4
BA	77.1	170.0	9253.2
CB	113.4	250.0	13607.7
CS	15119.7	33333.3	1814360.0
CY	0	0	0
IW	193012.0	425520.9	23161440.0
PR	0	0	0
SB	220520.3	486166.7	26462440.0
SI	22679.5	50000.0	2721540.0
SR	.6	1.3	68.0
			150.0

* For footnotes, see Table 8.

SECTION 5

SUMMARY OF HAZARDOUS WASTE GENERATION

1. INTRODUCTION

The space shuttle program at Vandenberg Air Force Base is expected to generate a variety of hazardous wastes during its years of operation, from 1985 to 1994. The purpose of this report is to present an inventory of the expected types and quantities of waste to be generated by shuttle-related ground operations. The inventory provides estimates for:

- Types of wastes generated.
- Chemical constituents in each waste stream.
- Mass and/or volume of waste generated during scheduled ground operations (per launch cycle, per month per year, and project total).
- Mass and/or volume of waste generated under contingency conditions (per contingency event, per year, and project total).
- EPA and California hazardous waste numbers for each waste.
- EPA and California hazardous properties for each waste.
- California compatibility class for each waste.

The inventory will be used to assess waste management options (Volume II of this report), to complete EPA hazardous waste forms, and for preparing the supplement to the Environmental Impact Statement required for the Space Transportation System (STS) project.

2. SOURCES OF WASTE

A summary of the hazardous wastes generated over the duration of the STS project at VAFB is given in Tables 14, 15, and 16; monthly, yearly, and total project quantities are reported, respectively, for normal operations and contingency conditions.

TABLE 14. SUMMARY OF BASELINE MONTHLY HAZARDOUS WASTE GENERATION, 1985-1994, BY STATION SET

Station Set	Monthly for 1985		Monthly for 1986		Monthly for 1987		Monthly for 1988-1994	
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
17	908.5	2,002.8	1,362.7	3,004.2	2,271.1	5,007.0	3,406.7	7,510.5
18	1.4	3.2	2.2	4.8	3.6	7.9	5.4	11.9
19	2,339.5	5,157.8	3,509.3	7,736.7	5,848.8	12,894.5	8,773.2	19,341.8
21	1,128.9	2,488.7	1,593.3	3,733.1	1,322.2	6,000.0	4,233.2	9,332.8
23	192,975.4	425,440.3	239,463.2	638,160.5	482,438.6	1,063,600.8	723,658.3	1,505,431.8
31	3,208.7	7,074.0	4,813.0	10,611.0	5,921.7	17,685.0	12,042.6	26,527.5
32	145,010.0	319,694.1	217,515.1	479,541.2	362,525.1	799,235.4	43,787.8	1,198,653.0
33	64.6	142.3	96.8	213.5	161.4	355.8	242.1	533.8
99	227.6	501.7	341.3	752.5	563.9	1,254.2	853.3	1,881.3
Other	792.3	1,746.7	1,188.4	2,620.0	1,980.7	4,366.7	2,971.0	5,550.0
TOTAL	346,656.8	764,251.5	519,985.3	1,146,377.5	866,642.5	1,910,629.8	1,299,963.8	2,865,245

TABLE 15. SUMMARY OF BASELINE YEARLY HAZARDOUS WASTE
GENERATION, 1985-1994, BY STATION SET

Station Set	1985		1986		1987		Yearly for 1988-1994		Project Total	
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
17	10,901.4	24,033.6	16,352.1	36,050.4	27,253.5	60,084.0	40,890.3	90,126.0	340,668.8	751,050.0
18	17.2	38.0	25.9	57.0	43.1	95.0	64.6	142.5	538.6	1,187.5
19	28,074.3	61,893.6	42,111.5	92,840.4	70,185.8	154,734.0	105,778.7	237,101.0	877,322.5	1,934,175.0
21	13,546.4	29,864.8	20,319.6	44,791.7	33,865.9	74,562.0	50,798.9	111,993.0	423,324.2	933,275.0
23	2,115,705.0	5,105,283.0	3,473,558.5	7,657,976.0	5,783,264.0	12,763,210.0	8,683,848.0	19,164,820.0	72,365,810.0	159,540,148.0
31	38,500.4	84,888.0	57,756.5	127,332.0	96,260.9	217,220.0	144,391.3	313,330.0	1,263,260.8	2,652,750.0
32	1,740,120.5	3,836,329.0	2,610,181.0	5,754,474.0	4,350,302.0	9,590,824.0	6,525,452.0	14,386,236.0	54,378,764.0	119,885,292.0
33	774.7	1,708.0	1,162.1	2,552.0	1,936.8	4,270.0	2,905.2	6,405.0	24,210.3	53,375.0
99	2,730.6	6,020.0	4,095.9	9,030.0	6,826.5	15,050.0	10,239.8	22,575.0	45,331.6	187,125.0
Other	9,507.2	20,960.0	14,260.9	31,440.0	23,768.1	52,400.0	35,652.2	79,602.0	297,101.5	655,000.0
TOTAL	4,159,882.0	9,171,018.0	6,239,824.0	13,756,530.0	10,399,710.0	22,927,556.0	15,599,566.0	34,391,336.0	129,996,350.0	286,594,408.0

TABLE 16. SUMMARY OF CONTINGENCY HAZARDOUS WASTE
GENERATION, 1985-1994, BY STATION SET

Station <u>Set</u>	1985			1986			1987			1988-1994 (per year)			Project Total
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	
17	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0
19	7,731.6	17,045.5	7,731.6	17,045.5	7,731.6	17,045.5	7,731.6	17,045.5	7,731.6	17,045.5	77,316.0	170,455.0	
21	11,430.5	25,200.0	14,696.3	32,400.0	21,228.0	46,800.0	29,392.6	64,800.0	253,103.0	558,000.0			
23	102,205.6	225,326.0	102,205.6	225,326.0	102,205.6	225,326.0	102,205.6	225,326.0	102,205.6	225,326.0	1,022,956.0	2,253,260.0	
31	0	0	0	0	0	0	0	0	0	0	0	0	
32	0	0	0	0	0	0	0	0	0	0	0	0	
33	0	0	0	0	0	0	0	0	0	0	0	0	
99	0	0	0	0	0	0	0	0	0	0	0	0	
Other	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	121,367.7	267,571.5	124,633.5	274,771.5	131,165.2	289,171.5	139,329. ⁷	307,171.5	1,352,475.0	307,171.5	1,352,475.0	2,981,715.0	

As shown in Table 15, total baseline waste generation for the STS project is anticipated to be 130 million kg (287 million lbs). Annual waste generation is estimated to range from 4.2 million kg/yr (9.2 million lbs/yr) for 1985, to 15.6 million kg/yr (34.5 million lbs/yr) for each of the years 1988 through 1994. This increase reflects changes in the number of launches per year from 4 to 15. Baseline waste generation for each year of the project is graphically represented in Figure 10.

The greatest quantities of wastes are expected to be generated by V23 (72 million kg; 160 million lbs for total project), followed by Station Set V32 (54 million kg; 120 million lbs for total project). This accounts for 97.5 percent by weight of all baseline hazardous waste generation. The combined waste generated by all other Station Sets is projected to be 2.5 orders of magnitude less by weight than waste generation at V23 and V32.

Expressed as percentages by weight (Figure 11), Station Set V23 is projected to generate 55.7 percent of the total under normal operating conditions; V32 approximately 41.8 percent; and V19 and V31, less than 1 percent each. The balance of these wastes (i.e., 0.9 percent) will be generated mainly by Station Sets V17 and V21.

According to Table 16, estimated total project waste generated under contingency conditions is 1.4 million kg (3.0 million lbs). The only station sets identified to date as potential generators of contingency wastes are V19, V21, and V23 (Figure 12). Station set V23 will produce approximately 84 percent by weight of all contingency waste.

Investigations into the physical state of the hazardous wastes generated during normal operations indicate that the majority of wastes are in a liquid state (Figure 13a). Major sources of liquid hazardous wastes, as shown in Figure 13c, are expected to be produced during normal ground operations at Station Sets V23 (55.9 percent) and V32 (41.9 percent). Other station sets each produce less than 1 percent of total liquid wastes. In summary, 99.6 percent by weight (1.0 million kg; 2.3 million lbs) of all the hazardous wastes will be in a liquid form (Figure 13a). This translates to 92.7 percent on a volumetric basis.

Only 0.4 percent by weight (7.3 percent by volume) of all hazardous wastes are expected to be in a solid state (Figure 13a). Most solid waste will be produced by Station Set V31 (71.5 percent) and Station Set V32 (19.1 percent) as shown in Figure 13b. Solid waste generation by all other station sets is less than 10 percent of total solids.

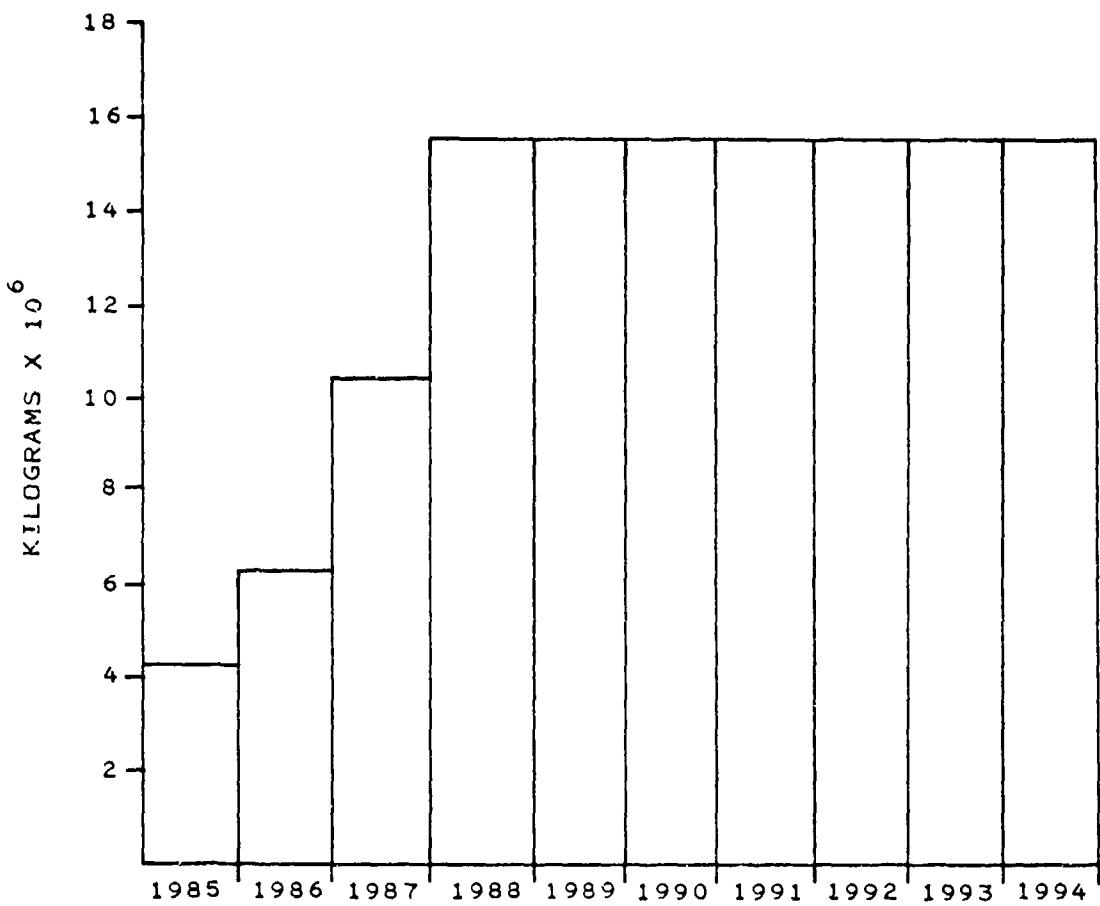


Figure 10. Baseline quantities of hazardous waste generated by STS ground operations at VAFB (reported for each year for the period 1985 through 1994).

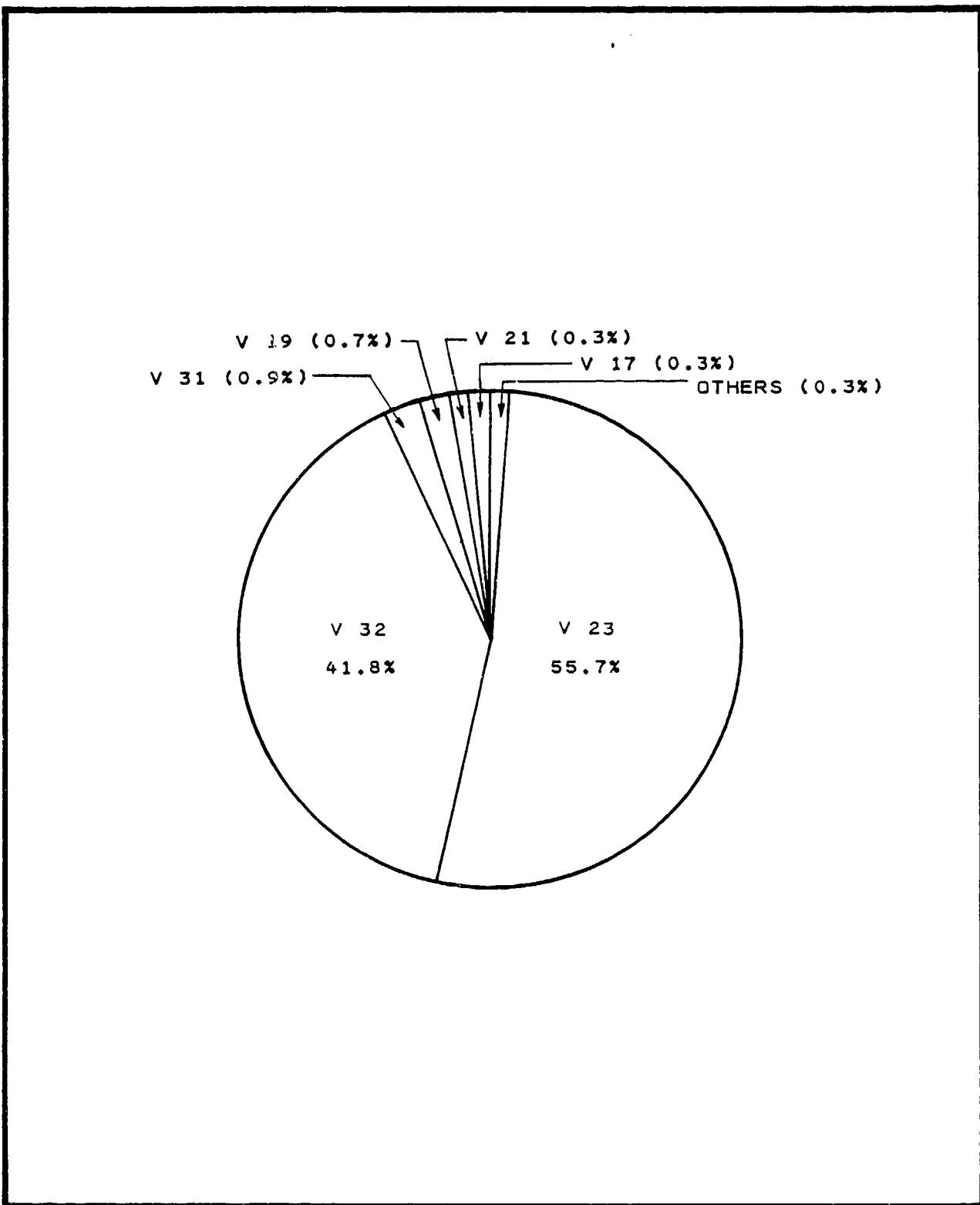


Figure 11. Baseline quantities of hazardous waste generated by STS ground operations at VAFB (reported by station set).

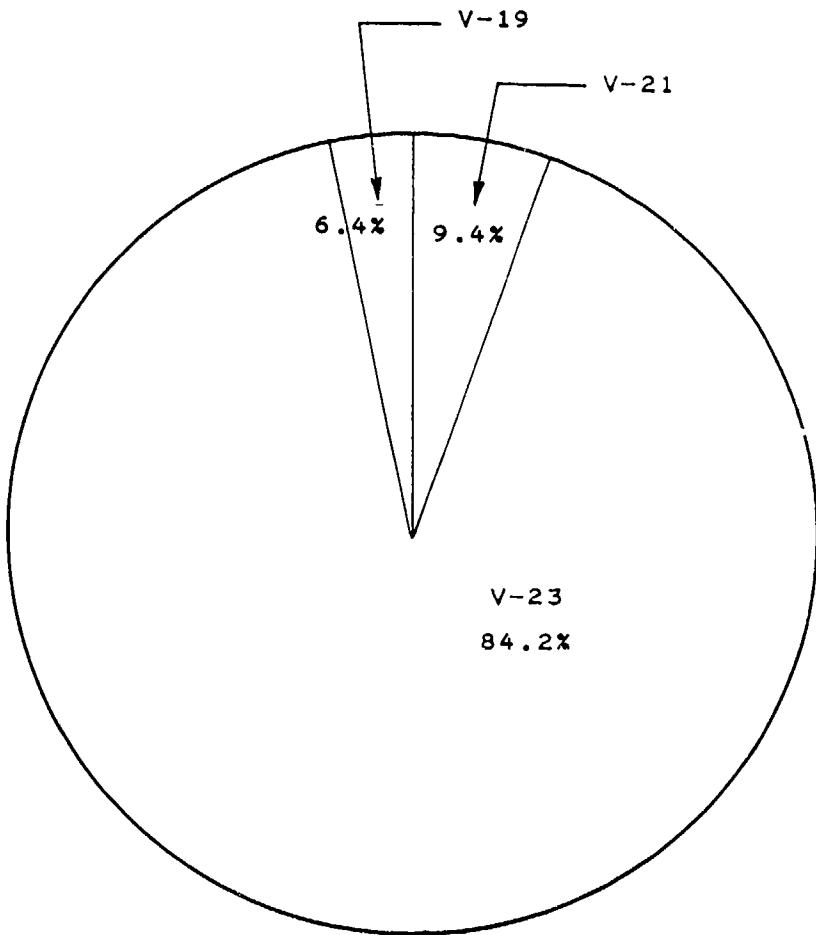


Figure 12. Contingency waste generated by STS ground operations at VAFB (Station Sets V19, V21, and V23).

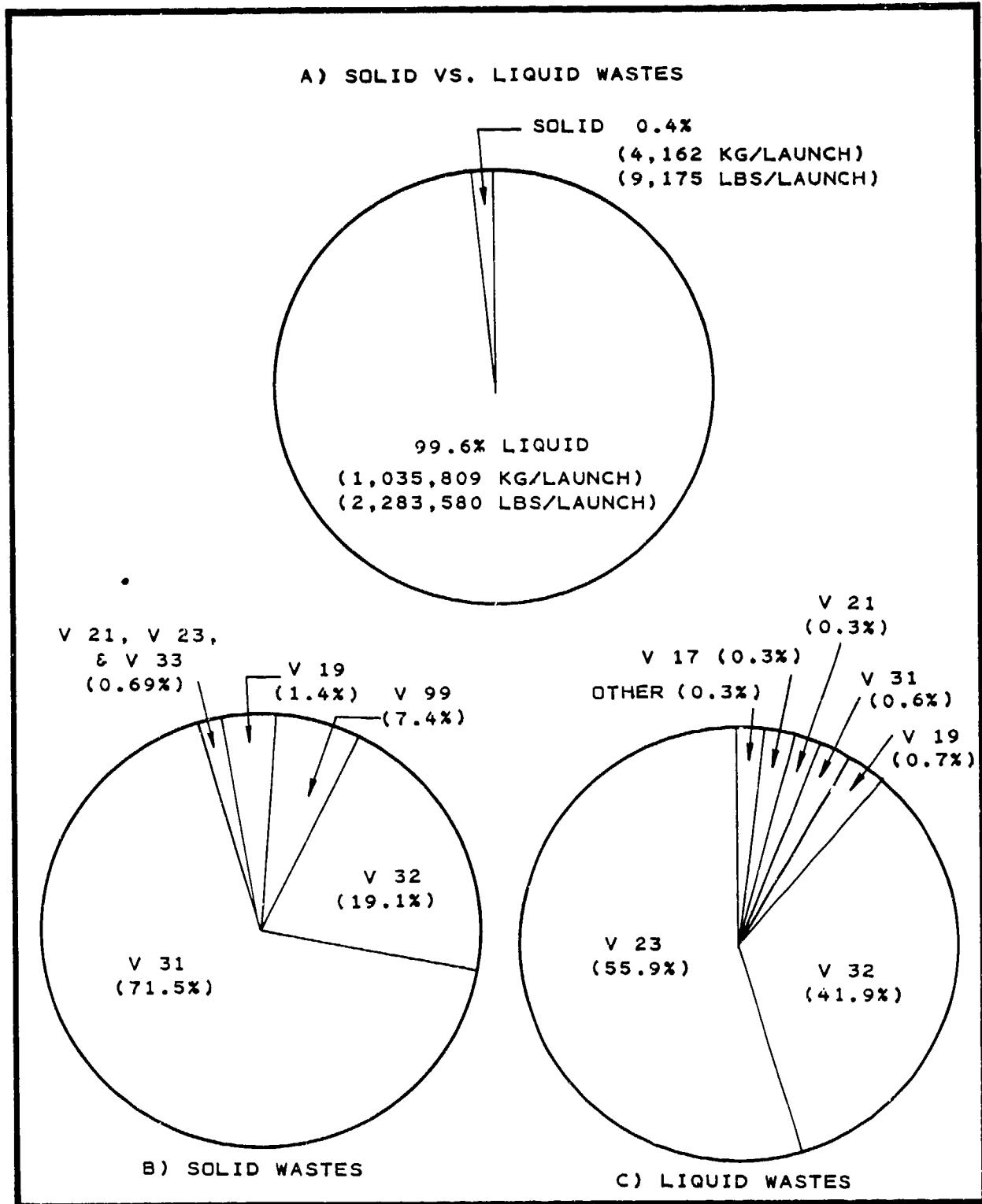


Figure 13. Physical state of hazardous waste generated by STS ground operations at VAFB under baseline conditions (reported by station set).

3. MAJOR TYPES OF WASTES GENERATED

Waste categories generated in the largest quantities are expected to be:

- Quench water (QW).
- SRB wash water (SB).
- Insulation wastewater (or "suprawater") (IW).
- SRB initial rinse (SI).
- Contaminated seawater (CS).
- Nonaqueous solvent wastes (SO).
- EEW&S wastewater (EW).
- Fuel spill cleanup wastes (FS).
- Hydrazine scrubber effluent (HS).

These wastes are estimated to constitute 99.4 percent by weight of total waste generation (129 million kg; 284 million lbs). The QW is projected to be the most predominant waste type, followed by SB and IW wastes. As shown in Figure 14a, these three waste types constitute 54.6, 20.4, and 17.8 percent by weight, respectively, of the total quantity of wastes generated by the major waste categories. Other major waste categories produce 7.2 percent of the total waste. The remaining 0.6 percent of waste is associated with the following minor categories (Figure 14b):

- Adhesive wastes (AW).
- Batteries (BA).
- Contaminated air filters (CA).
- Catalytic bed wash water (CB).
- Containers (CN).
- Contaminated rags (CR).
- Hydraulic fluids (HF).
- Hydrazine (HY).
- Insulation wastes, solid (IN).
- Monomethyl hydrazine (MH).
- Ammonia or ammonia wastewater (NH).
- Nitrogen tetroxide (NO).
- Oxidizer spill cleanup (OS).
- Paint wastes (PA).
- Paint wastewaters (PW).
- Solvent reducer wastes (SR).
- Solvent wastewaters (SW).
- Worn-out parts (WP).

The first three minor categories are expected to jointly contribute over 60 percent by weight to the 0.6 percent of minor wastes.

4. HAZARDOUS AND ACUTELY HAZARDOUS WASTES

Further breakdown of wastes into hazardous and acutely hazardous categories reveals that only 1.8 percent by weight of total hazardous wastes are expected to exhibit acutely hazardous properties (Figure 15a). Primary generators of acutely hazardous

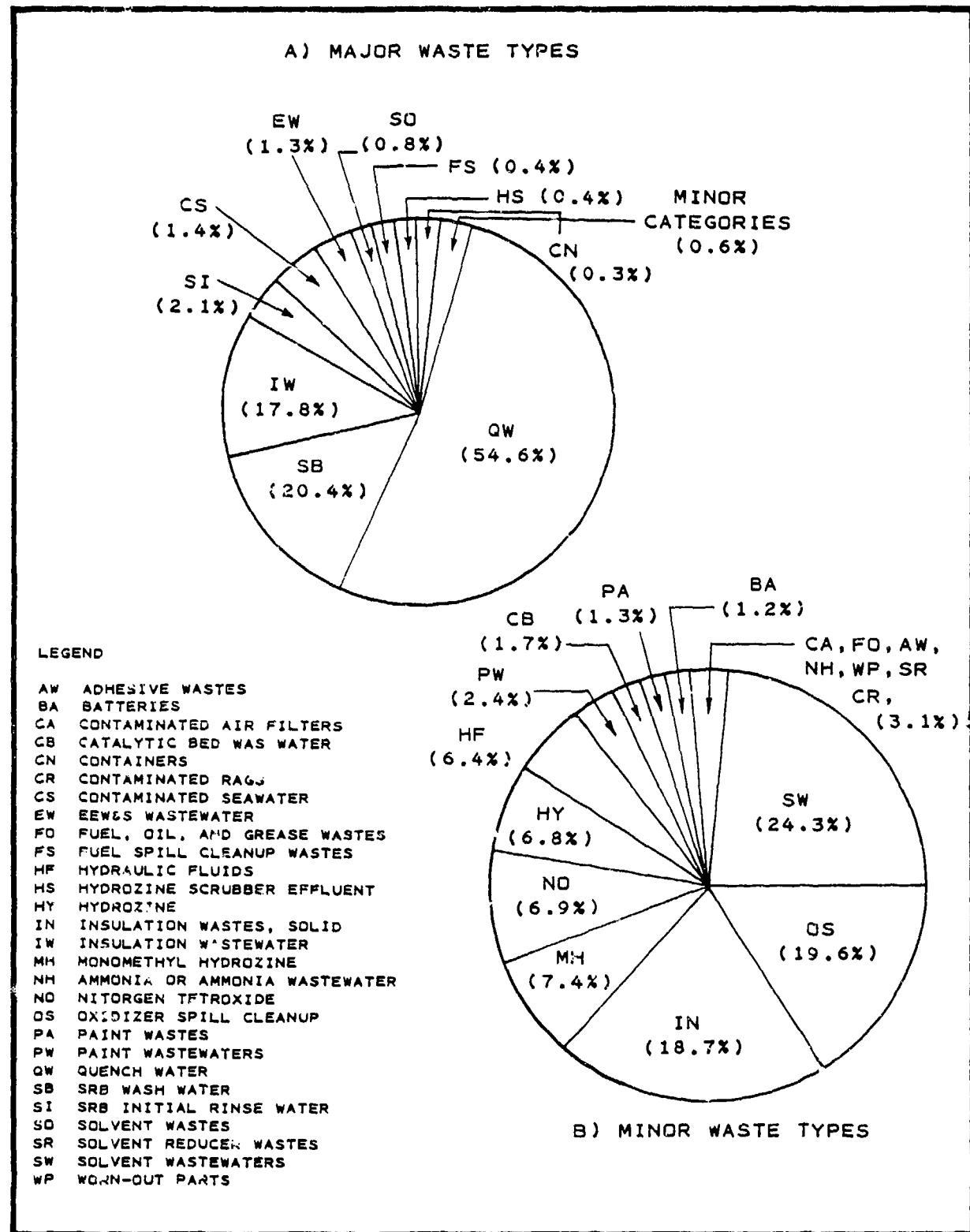
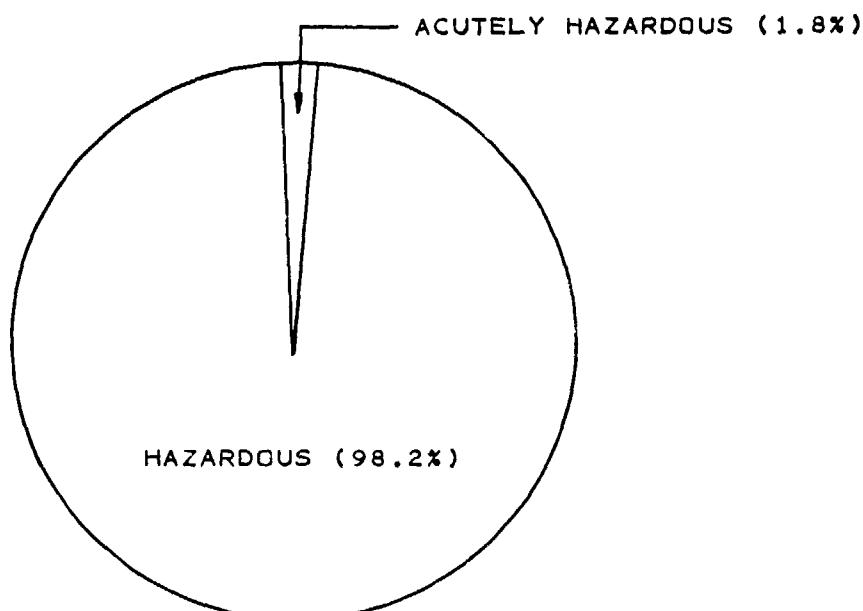
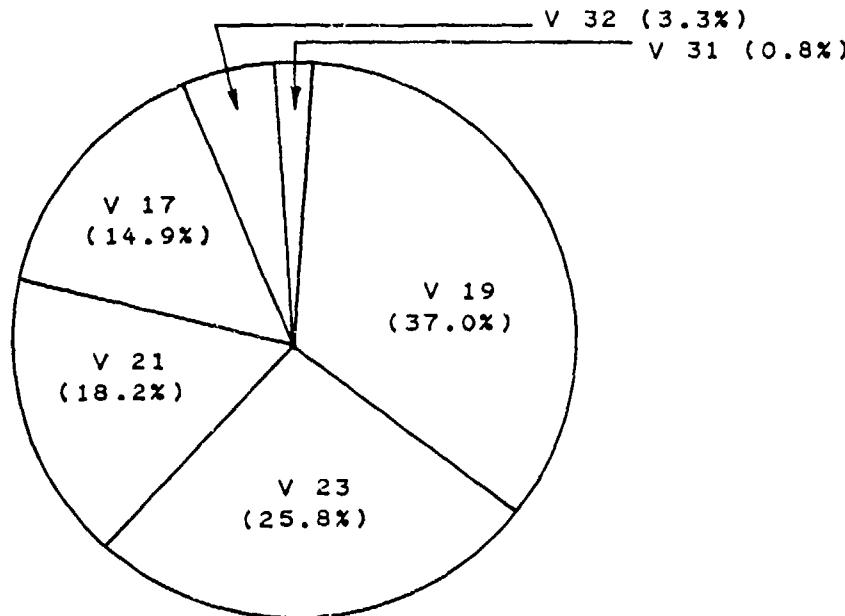


Figure 14. Hazardous waste generated under baseline conditions, by waste type.



A) PERCENT OF HAZARDOUS AND ACUTELY HAZARDOUS WASTES



B) ACUTELY HAZARDOUS WASTES BY STATION SET

Figure 15. Hazardous and acutely hazardous waste generation under baseline conditions.

waste will be Station Sets V19 (37.0 percent), V23 (25.8 percent), V21 (18.2 percent), and V17 (14.9 percent) (Figure 15b). The remaining 4.1 percent is expected to be generated by Station Sets V31 and V32 (3.3 and 0.8 percent, respectively) (Figure 15b). As shown in Figure 16, most of the hazardous wastes generated by Station Sets V17, V19 and V21 are expected to exhibit acutely hazardous properties.

Generation rates for hazardous and acutely hazardous wastes are provided in Tables 17 and 18. Total projected baseline quantities of hazardous and acutely hazardous waste per launch are 1.0 million kg (2.2 million lb) and 0.02 million kg (0.04 million lb), respectively (Table 14). Consequently, the projected cumulative generation of these wastes for the period 1985 through 1994 is expected to be 128 million kg (282 million lb) and 2.3 million kg (5.1 million lb), respectively (Table 18).

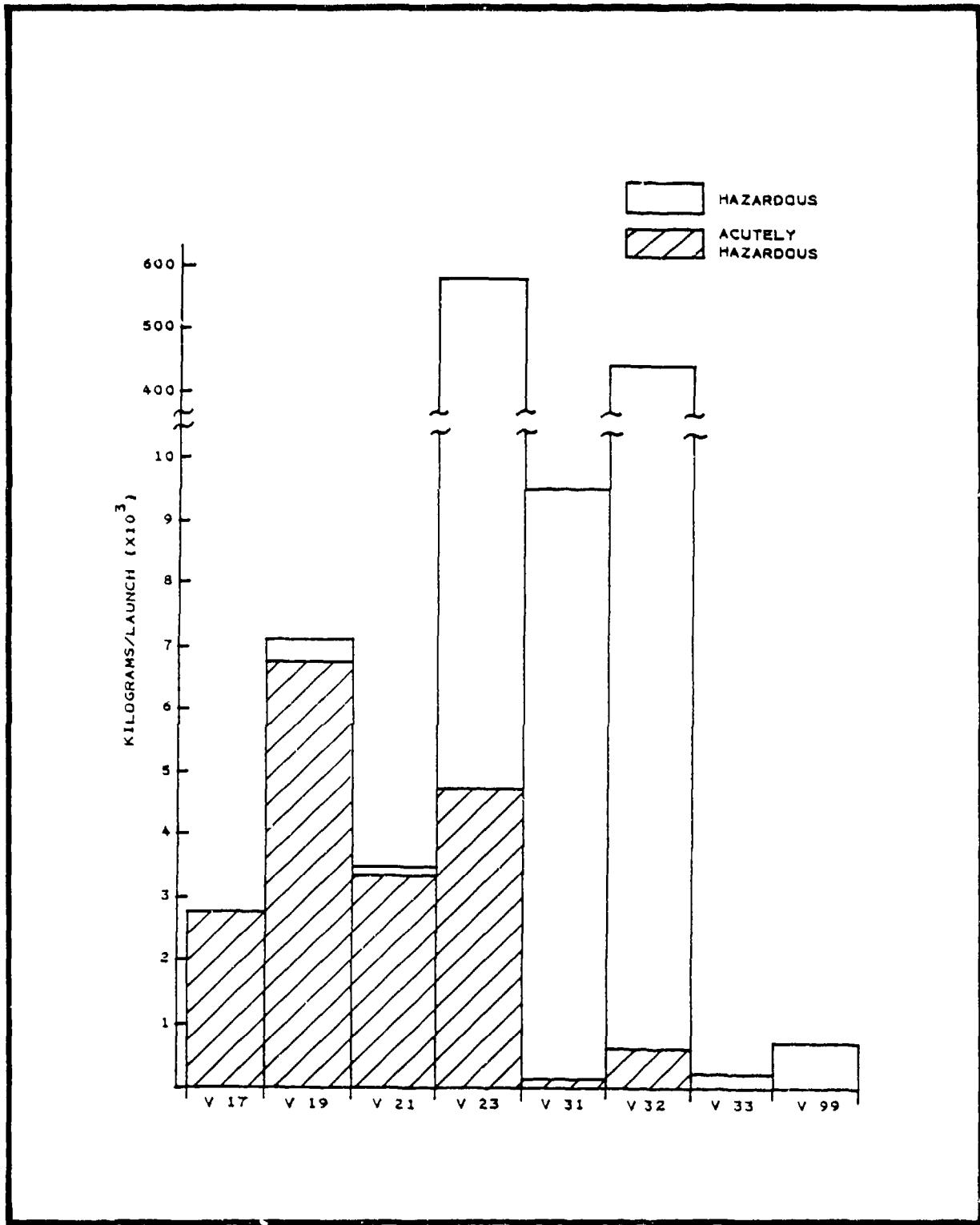


Figure 16. Comparison of hazardous and acutely hazardous waste generation under baseline conditions (reported by station set on a per launch basis).

TABLE 17. SUMMARY OF HAZARDOUS AND ACUTELY HAZARDOUS WASTE
GENERATION PER MONTH, 1985-1994.

Per Launch	1985 Monthly			1986 Monthly			1987 Monthly			1988-1994 Monthly		
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds
Acutely Hazardous Wastes	18,333.3	40,418.3	6,111.1	13,472.8	9,166.7	21,710.7	15,111.8	15,681.9	27,916.1	50,522.9		
Hazardous Wastes	1,021,637.3	2,252,336.7	340,545.7	750,778.7	510,818.6	1,176,168.1	611,168.7	1,676,947.9	1,711,047.1	2,615,421.6		
TOTAL	1,039,970.6	2,292,755.0	346,656.8	764,251.5	519,945.3	1,146,117.6	666,647.4	1,910,679.8	1,799,941.8	2,665,944.5		

TABLE 18. SUMMARY OF HAZARDOUS AND ACUTELY HAZARDOUS
WASTE GENERATION PER YEAR, 1985 - 1994

Acutely Hazardous Wastes	1985		1986		1987		1988-1994 (per year)		Total for Project Pounds
	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	Kilograms	Pounds	
Hazardous Wastes	73,333.4	161,673.2	110,000.0	242,509.8	183,333.4	404,183.0	275,000.1	606,274.5	2,231,667.1
	4,086,548.6	9,099,344.8	6,129,824.0	13,514,020.2	10,215,376.6	22,523,373.0	15,324,566.9	33,705,092.5	127,704,636.9
TOTAL	4,159,862.0	9,171,018.0	6,239,824.0	13,755,530.0	10,399,710.0	22,927,555.0	15,599,566.0	34,391,366.0	129,996,304.0
									286,594,304.0

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APPENDIX A

HAZARDOUS WASTE GENERATION BY STS
GROUND OPERATIONS AT VAFB, LISTED
BY EPA HAZARDOUS WASTE NUMBER

APPENDIX A

The following tables were compiled to assist VAFB personnel in completing all pertinent EPA notification and application forms. Both tables are organized by EPA hazardous waste number, in much the same fashion as required by the Hazardous Waste Permit Application Form 3510-3. Estimated annual hazardous waste quantities are presented for each waste. These quantities are based on the numerical data available at the time that the information was developed. Those hazardous waste numbers described as "included with above" are components of the quantified waste number above; as components, they do not need to be quantified separately if the total mixed waste is quantified. Table A-1 further divides the wastes by station set. Table A-2 presents the hazardous waste numbers and annual quantities for the project as a whole.

TABLE A-1. EPA DESCRIPTION OF HAZARDOUS WASTE
(by Station Set)

TABLE A-1 (continued)

EPA Station Set	Hazardous Waste No.	Quantity per Launch	Estimated Annual Quantity (kg)			Project Total
			1985	1986	1987 (per year)	
V 23	D001	2,323.1	9,292.4	13,938.6	23,231.0	34,846.5
	D002	568.092.2	2,275,968.8	3,413,953.2	5,689,922.0	8,534,883.0
	P068 included with above					71,124,025.0
	U133 included with above					
	*D003					
	P068	3,358.9	13,435.6	20,153.4	33,589.0	50,383.5
	P080	1,015.7	4,062.8	6,094.2	10,157.0	15,235.5
	U133	3,236.3	12,945.2	19,417.8	32,363.0	48,544.5
						126,962.5
						404,537.5
V 31	D001	2,506.1	10,024.4	15,036.6	25,061.0	37,591.5
	D003 included with above					
	F002 included with above					
	U013 included with above					
	U210 included with above					
	D002	37.6	150.4	225.6	376.0	564.0
	D007	153.8	615.2	922.8	1,538.0	2,307.0
	D002 included with above					
	P055 included with above					
	F001	4.5	18.0	27.0	45.0	67.5
	F002	3,973.6	15,894.4	23,841.6	39,736.0	59,604.0
	F005	552.5	2,210.0	3,315.0	5,525.0	8,287.5
	F017	1,272.0	5,088.0	7,632.0	12,720.0	19,080.0
	D001 included with above					
	D003 included with above					
	D007 included with above					
	F002 included with above					
	F003 included with above					
	F005 included with above					
	U210 included with above					
	U133	109.5	438.0	657.0	1,095.0	1,642.5
	U159	529.8	2,119.2	3,178.8	5,298.0	7,947.0
	U210	0.6	2.4	3.6	6.0	9.0
	D001 included with above					
	F002 included with above					

TABLE A-1 (continued)

EPA Station Set	Hazardous Waste No.	Quantity per Launch	Estimated Annual Quantity (kg)		Project Total
			1985	1986 1987	
Y 32	D001	740.8	2,963.2	4,444.8	92,600.0
	D002 included with above			7,408.0	11,112.0
	D003 323.5 included with above	1,294.0	1,941.0	3,235.0	4,852.5
	D003 included with above				40,437.5
Y 33	D011	40.8	163.2	244.3	612.0
	P068	605.6	2,422.4	3,633.6	6,056.0
	U133	41.0	164.0	246.0	410.0
Y 99	D091	193.7	774.8	1,162.2	1,937.0
Y 99	D001	345.8	1,383.2	2,074.8	3,458.0
	U229 included with above				5,187.0
	U239 included with above	128.3	513.2	769.8	1,283.0
	D001 included with above				43,225.0
Y 102	U102 included with above				16,037.5
	U160 included with above				
	U229 included with above				
	F002	0.2	0.8	1.2	2.0
F 005	F005	81.0	324.0	486.0	810.0
	F017	0.1	0.4	0.6	1.0
	D001 included with above				
	D007 included with above				
F 003	F003 included with above				
	U057 included with above				
	U159 included with above				
	U161 included with above				
U 159	U220 included with above				
	U239 included with above				
	U159 101.1 included with above	404.4	606.6	1,011.0	1,516.5
	U057 included with above				12,637.5
Other	F002	2,376.8	9,507.2	14,260.8	23,768.0
					35,652.0
					297,100.0

* Data not presently available.

TABLE A-2. EPA DESCRIPTION OF HAZARDOUS WASTE
(Overall)

EPA Hazardous Waste No.	Quantity per Launch	Estimated Annual Quantity (kg)			Project Total
		1985	1986	1987	
*D0000					
U013	included with above				
U092	included with above				
D001	6,140.7	24,562.8	36,844.2	61,407.0	92,110.5
D002	included with above				
D003	included with above				
F002	included with above				
F003	included with above				
F005	included with above				
U013	included with above				
U159	included with above				
U210	included with above				
U229	included with above				
U239	included with above				
D002	572,981.2	2,291,924.8	3,437,887.2	5,729,812.0	8,594,718.0
P068	included with above				
U133	included with above				
D003	128.8	515.2	772.8	1,288.0	1,932.0
D001	included with above				
F002	included with above				
U102	included with above				
U160	included with above				
U229	included with above				
D007	153.8	615.2	922.8	1,538.0	2,307.0
D002	included with above				
P055	included with above				

TABLE A-2 (continued)

EPA Hazardous Waste No.	Quantity per Launch	Estimated Annual Quantity (kg)		Project Total
		1985	1986	
D011	40.8	163.2	244.8	408.0
F001	4.5	18.0	27.0	45.0
F002	6,350.6	25,402.4	38,103.6	63,506.0
F005	633.5	2,534.0	3,801.0	6,335.0
F017	1,299.5	5,198.0	7,797.0	12,995.0
D001 included with above				
D003 included with above				
D007 included with above				
F002 included with above				
F003 included with above				
F005 included with above				
U057 included with above				
U159 included with above				
U161 included with above				
U210 included with above				
U220 included with above				
U239 included with above				
P068	12,580.5	50,322.0	75,483.0	125,805.0
P080	1,669.5	6,678.0	10,017.0	16,695.0
*U080				
U133	3,454.8	13,819.2	20,728.8	34,548.0
U159	715.7	2,862.8	4,294.2	7,157.0
U057 included with above				
U210	0.6	2.4	3.6	6.0
				9.0
				75.0

* Data not presently available.

GLOSSARY

ADDI	Additives
AFB	Air Force Base
Ag	Silver
Al	Aluminum
APPL	Application
APS	Aft propulsion system
APU	Auxiliary power unit
ARCS	Aft reaction control subsystem
AUX	Auxiliary
BGE	Butyl glycidyl ether
C	Corrosive
CAT	Category
CC	Cubic centimeters
CF	Cubic feet
CFM	Cubic feet per minute
CLNP	Cleanup
CM	Centimeters
CMP	Corrugated metal pipe
CMPNTS	Components
CO ₂	Carbon dioxide
COMP	Compatibility
Cr	Chromium
Cu	Copper
CY	Cubic yards
DOT	Department of Transportation
E	EP toxic
EEW&S	Emergency eyewash and shower
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ET	External tank
F	Flammable
FRCS	Forward reaction control system
Ft ²	Square feet

GLOSSARY (continued)

Ft ³	Cubic feet
FWD	Forward
Gal	Gallons
GH ₂	Gaseous hydrogen
GHe	Gaseous helium
GN ₂	Gaseous nitrogen
GO ₂	Gaseous oxygen
GPM	Gallons per minute
H	EPA acutely hazardous
H ₂ O	Water
H ₂ O ₂	Peroxide
Ha	Hectares
He	Helium
HP	Horsepower
HYD	Hydrazine
Hz	Hertz
i	Ignitable
I	Irritant
IPA	Isopropyl alcohol
ISP	Instant set polymer
IW	Insulation wastewater (suprawater)
KSC	Kennedy Space Center
kV	Kilovolts
kVA	Kilovoltampere
kW	Kilowatt
L	Liters
LAPS	Left aft propulsion system
LBM	Liquid boost module
Lbs	Pounds
LH ₂	Liquid hydrogen
LIQ	Liquid
LN ₂	Liquid nitrogen
LO ₂	Liquid oxygen

GLOSSARY (continued)

LP	Launch pad
M	Meter
M ²	Square meters
M ³	Cubic meters
MDA	Methylene dianiline
MDI	Diphenyl methane diisocyanate
MEC1	Methylene chloride
MEK	Methyl ethyl ketone
Mg	Magnesium
MMH	Monomethylhydrazine
mPDA	meta-Phenylene diamine
MSA	Marshall Sprayable Ablative
MTA	Marshall Trowable Ablative
N/A	Not applicable
N ₂	Nitrogen
N ₂ H ₄	Anhydrous hydrazine
N ₂ O ₄	Nitrogen tetroxide
NaOH	Sodium hydroxide
ND	No data
Neg	Negligible
NH ₃	Ammonia
NVAFB	North Vandenberg Air Force Base
O&M	Operation and Maintenance
O ₂	Oxygen
OPNS	Operations
ORB	Orbiter
ORD	Ordnance
OXID	Oxidizer
P	Pressure generating
Pb	Lead
PBK	Payload bay kit
PCB	Polychlorinated biphenyl
PCR	Payload changeout room

GLOSSARY (continued)

PERC	Perchloroethylene
PH	Port Hueneme
POTW	Publicly owned treatment works
PPM	Parts per million
PPR	Payload preparation room
PRG	Purge
PROT	Protective or protection
PSI	Pounds per square inch
PVC	Polyvinylchloride
QW	Quench water
R	Reactive
RAPS	Right aft propulsion system
RCRA	Resource Conservation and Recovery Act
RSV	Remote service vehicle
RTN	Routine
RV	Retrieval vessel
S	Strong sensitizer
S&A	Safe and arm
SCAPE	Self-contained atmospheric protective ensemble
SEG	Segment
SF	Square feet
SKT	Skirt
SOFI	Spray-on foam insulation
SOL	Solid
SPL	Spill(s)
SRB	Solid rocket booster
SRM	Solid rocket motor
SS	Station set
SSS	Station set specification
STA	Station
STS	Space transportation system
SVAFB	South Vandenberg Air Force Base
T	Toxic

GLOSSARY (continued)

TCE	1,1,1-trichloroethane
TP	Thrust post
TPH	Tons per hour
TPS	Thermal Protection System
TRT	Treatment
TVC	Thrust vector control
UDMH	Unsymmetrical dimethylhydrazine
VAFB	Vandenberg Air Force Base
Zn	Zinc

CATEGORY CODES

AL	Alkaline cleaning solutions
AW	Adhesive wastes, nonaqueous
BA	Batt ries
BW	Bilge wastes
CA	Contaminated air filters
CB	Catalytic bed wash water
CC	Contaminated clothing
CN	Containers
CR	Contaminated rags
CS	Contaminated seawater
CW	Forward skirt cleaning wastes
EW	EEW&S wastewater
FO	Fuel, oil and grease spills and wastes
FS	Fuel spill cleanup
HF	Hydraulic fluids
HS	Hydrazine scrubber effluent
HY	Hydrazine
IN	Insulation wastes, solid
IW	Insulation wastewater (suprawater)
MH	Monomethylhydrazine
NH	Ammonia (NH_3), or water with ammonia
NO	Nitrogen tetroxide (N_2O_4)
OR	Ordnance
OS	Oxidizer spill cleanup
PA	Paint wastes, nonaqueous
PR	Preservative wastes, nonaqueous

CATEGORY CODES (continued)

PS	Propellants, solid
PW	Painting wastewater
QW	Quench water
SB	SRB wash water
SI	SRB initial rinse
SO	Solvent wastes, nonaqueous
SR	Solvent reducer wastes
SW	Solvent wastewater
WP	Worn-out parts
WS	Wastewater treatment sludges